

gcaagggcct ggggtgtmgt ggggtgcaccc ggatgggggtg ggcgtccaga tcgacacccat
420
cacgcccag atccgcgctc tctacaacgt gctggccaaa gtgaagcggg agcgggacga
480
gtacaagcgg aggtgggaag aggagtacac ggtgcggatc cagctgcaag accgtgtaaa
540
tgagctccag gaggaagccc aggaggctga tgcctgccag gaggagctgg cactgaaggt
600
ggaacagtgt aaggctgagc tgggtgtctt caaggggctc atgagtaaca acctgtcgga
660
gctggacacc aagatccagg agaaagccat gaaggtggat atggacatct gccgccgcat
720
cgacatcacc gccaaactct gcgatgtggc tcagcagcgc aactgcgagg acatgatcca
780
gatgttccag aagaagctgg tcccatccat gggggggcgg aagcgggagc gcaaggctgc
840
cgctcaggag gacacctccc tgtcggagag tgaggggccc gccagcccga tggggatgag
900
gaggagagca cagccctcag catcaacgag gagatgcagc gcatgctcaa ccagctgagg
960
gagtatgatt ttgaggacga ctgtgacagc ctgacttggg aggagactga ggagaccctg
1020
ctgctttggg aggatttctc aggctatgcc atggcagctg cagaggccca gggagagcag
1080
gaagatagcc tggagaaggt gattaaagat acggagtccc tgttcaaac ccgggagaag
1140
gagtatcagg agaccattga ccagatagag ctggagtgtg ccacggccaa gaacgacatg
1200
aaccggcacc tgcacgagta catggagatg tgcagcatga agcgcggcct ggacgtgcag
1260
atggagacct gccgccggct catcaccagc tctggagacc gaaagtctcc tgctttcact
1320
gcgggtcccg ttagcgaccc gccgccgccg ccaagcgagg ctgaggactc cgatcgcgat
1380
gtctcatctg acagctccat gagatagaga cctgcctccc ccttgacccc gagggcctcg
1440
cagcagggag ctcagcgagg cagaggggtg ggctgcacag aggggaacat cagctgcagc
1500
tctgcaccag gccggtccct ggggactggg gcgctcctcc ctcaggcttt ctccctcagt
1560
cttggttctt ccagggtctt ggggtgtctg gagctaggct tggccctacc attctggggc
1620
catttccacc acagttgggg ctctcctgcc ttcacgcgtg ggtgtctgct acttcccat
1680
ctttaaagt ctgccagagc gattgcggcc cctcacctg tccacgtatc aggaatgtga
1740
atgtgggacc tttcctccat ccctgtgtg cggagccagc tctgtctt ccacactggt
1800
gctaactggc ccaggcactg gagtgaata gaatgcagct ggaggctacg catggcctct
1860
gcagcacacg cagctggaga gggcttctgt ccctgtcagc ggcagagggc gttggggctg
1920
gccggggcac cttgtccctg ctatggtcca catgctcacg ctgtccacct gccaggtgga
1980

gtgtatgtgg ctgtggccct ccctcgtgga ggtgccgtgc tttaaagagg ccttagtgcc
 2040
 cgggatgggc acagtgtttt gaagggaggt gggagctctt gctctcctgg tcaactgcaga
 2100
 atgacagaga aggtgaagct ccatgcatgt gtgcgcgggt gtatgtgcgc tcaggggtctc
 2160
 tgtttaagta tcagctaaag atgtgcttcc tccgtgtctg tcatacactg agaccaacag
 2220
 gctacagtgt ccctgattct tggaaaagcc tggagaagct ggggagatgc gggttcacaat
 2280
 gcctcgggat aggaggctgt gttgagctga cattcaaag gattctttaa taataatgaa
 2340
 actggcgagt atttattgtg caaaaaaaaa aaaaaaaaaa
 2380

<210> 4826

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4826

Leu	Glu	Lys	Val	Ile	Lys	Asp	Thr	Glu	Ser	Leu	Phe	Lys	Thr	Arg	Glu
1				5				10						15	
Lys	Glu	Tyr	Gln	Glu	Thr	Ile	Asp	Gln	Ile	Glu	Leu	Glu	Leu	Ala	Thr
			20					25					30		
Ala	Lys	Asn	Asp	Met	Asn	Arg	His	Leu	His	Glu	Tyr	Met	Glu	Met	Cys
		35				40						45			
Ser	Met	Lys	Arg	Gly	Leu	Asp	Val	Gln	Met	Glu	Thr	Cys	Arg	Arg	Leu
	50				55						60				
Ile	Thr	Gln	Ser	Gly	Asp	Arg	Lys	Ser	Pro	Ala	Phe	Thr	Ala	Val	Pro
65					70					75				80	
Leu	Ser	Asp	Pro	Pro	Pro	Pro	Pro	Ser	Glu	Ala	Glu	Asp	Ser	Asp	Arg
			85					90						95	
Asp	Val	Ser	Ser	Asp	Ser	Ser	Met	Arg							
			100					105							

<210> 4827

<211> 6277

<212> DNA

<213> Homo sapiens

<400> 4827

ntaatataca ccacgttttc agcctaccac attgtagttt ggcaggccag gctctgcatt
 60
 ccaagggggc aggtgctggt tgctccagag gccttgagga gaaatctagg ggcagaccag
 120
 gtgtgtgctt cagctccaag tttctcttgc tttagcagca aaatgcggcc tctcatctct
 180
 accaaagcaa cagtggactc gtacccctcc ccacctcca agtagttcag gggatggggg
 240
 gggatgtgcg aataaaaaata aagatgagtc aagaccagca tcttcaaatt aacaaactgt
 300
 aattgttttc ccaaagatac atttttttca tacacatcca tcatacactg taaccaaaaa
 360

aagcagtgt catgaaataa gagaaaataa attaaaaatc catagcatag gtaaggaggc
420
tctagtctgg agcacagctg agtttccagc aatataagga ggctcgaaag tttcttttat
480
aagaatgcct gctagcaagg gttccagcaa ggtggttggg tggctctgaa gtcagtcttg
540
agtacttgaa acagttctgt gtttgttttt tttccttagc gtttagaata gccatcattg
600
tcctgcaata ggcagagcta tcacgtccag gaaaaatgag ggagggaacc acagaggcag
660
cgtgagatcc aaatacagca ttcaaaggta attggtccag tggcgctgg ggaggaggga
720
aggggtgatac tccagggtta gccgtcttct tttgggggtg tgtaccagcc gttttttttc
780
gtggatctgc accaaggact tgtaggactg ctgtgctctt gtcagactgt attgagattt
840
gttggtccca aactgcactc gtgctttccc cttcaccagt gtggcactga tctgcatgat
900
gaccgattct attgagtagg cactgctcca gccctgtttg gtgagaagtt ccatgcagat
960
ggcccctccg ccgagaacat accctccaga gaggactgga gacacaacc tgacaaatgg
1020
tgggtcaaag ggaaagtatt ctttaaagga aaagttaagt agaatgaagt cggctccttc
1080
tttctctttg aggatctgga gatcggtgtg caaagcgctg tcctgggtcaa ctttgaggag
1140
tttaacattc caatcataca gactgtcatt cacgagttcc actgaataaa tcctgtttt
1200
ataactctgt gatcggtata tatccctgag ctctttcatc agccggtcag tggcctgcac
1260
cgagccagac actgcacat ttaaatggtc ttgcctttga gtctttttta ttttctctaa
1320
tattgccaaa ttttcttttt caattccttc atcctctgac tttttccac taataggctc
1380
tttctccttc atctcatagt gatctaagtc ttctatatct tcagccatct cttctcttc
1440
ttcctcttct tctgaagtca cttcttctgt tgtcccatc tgaccogtgg gtagtgggtg
1500
atctagcatc tcaacatcca ggtgcttagg aaggttatat aaactgcaga gttcacatat
1560
caaccacttc aattgctgac gaagcaaatt gttgttctta gtatcttcta gacgttccag
1620
aactgatgac agatttgggt cttcagaatc cacaaacat atcgggtgaag aagatggata
1680
ggattccgtg atgttgagcagg ggagcgtagg tggcgggcggc agcgagtgcg ggctgccctg
1740
ctgcggcacc aggaactggc agtgcagctc gtccagcttc caactgacga tgcggaatcg
1800
ctcgtggttc ttgtcgaaga tggacgccag gaacttcagc tcggccttga gccctgacac
1860
ggacatcttc ccctcatctc cggcgggagg ggcgcggaag gggagccggg cgcggaaggg
1920
gagccgggccc cggagccgcc gtcacggccc cgaccgcccc gcgggcccgc ctgggcccgc
1980

ctctccgcct cgtcgagcgc tgctggaaaa tggcgagggg gcgcggaagc ctccggcgtct
2040
gggagcccgc ggccggagaa gggctgcggg ttagggggcc ggcgccgcg gttcaggatt
2100
ccagaattgg aaataacggg agggaggacc tggccagct tcccttctc aaataaggaa
2160
attgacacct ggcgtgagaa ggggttttgc catgttcgct aggctggctt caaactcatg
2220
gattcaaggg gactgcccgc ctggacctcc caaagtactg agattagtag ctgtggagaa
2280
gaaacaatgg attccttaga ccatatgctg acagatcctc tggaacttgg tccgtgtgga
2340
gatggccatg gcacgcgcac catggaggat tgcctcctgg gaggcaccag agttagtctg
2400
cccaggacc ttctggagga tcctgagatc ttctttgatg ttgtcagcct ctcaacatgg
2460
caggaagtgt taagtattc tcaacgtgaa cacctccagc agtttctgcc ccagtttctt
2520
gaagacagtg ctgagcagca gaatgaactc atcttagcct tgttcagtgg ggagaacttc
2580
cgctttggaa accctctgca cattgcccgag aagcttttcc gagacggaca ctttaacccc
2640
gaggtggtca agtaccggca gttatgcttc aagtcacagt acaagcgcta cctcaactcc
2700
cagcagcagt atttccatcg gctgctgaag caaattcttg cttcccgag tgatctgctg
2760
gagatggccc ggccggagtgg ccccgccctt cccttcggc agaaacgccc ttcaccatcc
2820
cgcacacctg aggagcggga gtggcggacc cagcagcgt acttgaaggt cttaaggga
2880
gtgaaagagg agtgtggtga cacagccctg tcatctgatg aagaggatct cagctcatgg
2940
cttccgagct ctccagcacg ttctcctagt cctgcggtgc ccctgcgggt ggtgcccaca
3000
ctttcaacca cggatatgaa aactgcagat aaagtagaac tgggggacag tgacctgaag
3060
ataatgttaa agaagcacca cgagaagcgg aaacatcagc cagatcaccg ggaccttttg
3120
acaggggacc tgactctcaa tgacatcatg actcgagtaa atgctggcag gaagggtctt
3180
ctggcagcct tatatgactt ggctgtcctt aaaaaaagg ttaaggaaaa agaggaaaag
3240
aagaagaaga aaataaaaac gatcaaatca gaggcagagg acctggccga gccgctaagc
3300
agtactgaag gggtcgcacc tctctcacag gccccctctc cgctggcaat tcctgctatc
3360
aaggaagagc cccttgaaga cctcaagcct tgccttgga tcaatgaaat atcttccagc
3420
ttcttctctc ttctattaga gatcttgctg ctggagagtc aggctagcct tcctatgcta
3480
gaggagcgag ttttggattg gcagtcacg ccagccagct ccctcaacag ctggttctct
3540
gcgccccca actgggctga gttggtacta ccagccctgc agtatcttgc tggagaaagt
3600

cgagctgttc cttccagttt ctctccattt gttgaattca aagagaaaac ccagcagtgg
3660
aagttgcttg gccaatccca agataatgaa aaggaattag ctgccctctt ccagctatgg
3720
ctagagacca aagatcaggc cttctgtaag caagaaaatg aagacagctc agatgccaca
3780
acacctgtcc ctcgggtaag aactgactat gtggtgcgtc ccagcacggg ggaggagaaa
3840
cgggtttttc aggagcagga gcgttacagg tatagccaac ccataaggc gttcaccttt
3900
cgatgcacg gctttgagtc tgtggtgggg ccagtgaagg gcgtgtttga caaggagacc
3960
tcgctcaaca aggctcggga gactccctg ctgcgctccg accggcctgc ctacgtcacc
4020
attctgtctc ttgttcggga cgctgcggtc cgactgccta atggagaagg cacacgggca
4080
gagatctgtg aactgcttaa ggactcccag tttcttgca cagatgtcac cagcactcag
4140
gtaatacag tagtgagtgg tgcactggat cggctacatt acgaaaaaga tccctgtgtg
4200
aaatacgaca ttggacgaaa gctgtggatc tacctgcac gtgaccggag tgaagaagag
4260
tttgagcgga ttcaccaagc acaagcagct gcagctaaag ccagaaaagc tcttcagcaa
4320
aaaccaagc ccccatccaa ggtgaagtcc agtagcaagg agagctccat aaaggtcctt
4380
agcagtggcc cttctgagca gagccagatg agcctcagtg actccagtat gccaccacc
4440
ccagtcacac ctgtaacccc caccacacca gcattgcccc ccattcccat ctcccctcca
4500
cctgtatcgg cagtgaacaa aagcggccct tccacagtct cagaaccagc taagtctagc
4560
tcgggtgttc ttctggtgtc ttcaccaaca atgccacatc tgggaacaat gctttcccca
4620
gcttcagcc agactgcacc cagttctcag gctgccgcc gggctcgtgag ccactctggc
4680
tctgctggac tgtctcaggt gcgagtgggt gccccagccta gccttctctgc tgttcccccag
4740
cagtcgggag ggccggcaca gacattgcc aagatgccag caggaccgca gatccgggtt
4800
ccagccactg ccacacagac caaagtagtg cccagacag taatggccac tgtgcccgtc
4860
aaagcgcaga ctacggcagc cactgtgcag cggcctggac ccgggcagac agggctcacg
4920
gtgacaagtc tccctgccac agccagccct gtgagtaagc cagccacgag ttctcctggg
4980
acctctgtc ccagtgcctc cagggctgcc gtcattcaaa atgtcacagg acagaacatc
5040
atcaagcagg tggcaatcac tgggcagctt ggtgtgaagc cccaaacagg caacagcatt
5100
ccactcacag cactaactt ccgcatccag ggtaaggatg tattgcgtct gccgccctct
5160
tccatcacca cagatgcaa gggccagacg gttctgcgaa tcactccgga catgatggcc
5220

acattggcca agtcccaggt taccacagtc aaattgaccc aggacctctt cgggacagga
 5280
 ggcaacacta caggcaaagg catctctgcc accttacacg tcacttccaa tccagtacat
 5340
 gcagctgata gccctgccaa ggccagttca gccagtgtcc cttcatccac tccaacaggt
 5400
 accactgtgg tcaaagtga tcttgacctc aagccaacag aagcctcaag ttcggctttt
 5460
 cgcttgatgc cagctcttgg cgtgagtgtg gctgaccaga agggaaaaag cacagtggcc
 5520
 tcttcagaag caaaaccagc tgccacgac cgcacgtgc agggactggg agtgatgcct
 5580
 cccaaagcag gccagaccat caccgttgca acccacgcca agcaaggggc ctcggtggcc
 5640
 agtgggtctg gaactgtcca tacttcagcg gtgtccttac ccagtatgaa tgctgctgtg
 5700
 tccaagactg tagctgtggc ttctggggct gcaagcacc ccatcagcat cagcacagga
 5760
 gccccaccg tgcggcaggt ccctgtcagc accacggttg tgccacgtc ccaggctggg
 5820
 aagttgcta caccgatcac agttccctc tctgtgatca gccagccaat gaagggaag
 5880
 agcgtggtca cagcccccac catcaaagc aaccttgag ccaacctcag tgggttggc
 5940
 cgcaacatca tctcacaac tatgccagca ggcactaagc tcattgctgg caataagcct
 6000
 gttagtctcc tcaactgtca gcagttgcag cagcttcagc agcaaggta ggccacacag
 6060
 gtgcgcatcc agactgtccc tgcacccnat ctccaacagg gaacagcttc tggtcctcc
 6120
 aaagcagtct ccaactgttg tgtgactaca gtcctgtc ctaaaccagg acctgagcaa
 6180
 caatgattat gagagaggat gggcttcctg gaaagaccat gcctgggtctg tcttggctga
 6240
 gaagggaacca gggaggttgc atcattatc taagctt
 6277

<210> 4828

<211> 1322

<212> PRT

<213> Homo sapiens

<400> 4828

Met	Asp	Ser	Arg	Gly	Leu	Pro	Ala	Trp	Thr	Ser	Gln	Ser	Thr	Glu	Ile
1				5				10						15	
Ser	Thr	Cys	Gly	Glu	Glu	Thr	Met	Asp	Ser	Leu	Asp	His	Met	Leu	Thr
			20					25					30		
Asp	Pro	Leu	Glu	Leu	Gly	Pro	Cys	Gly	Asp	Gly	His	Gly	Thr	Arg	Ile
		35					40				45				
Met	Glu	Asp	Cys	Leu	Leu	Gly	Thr	Arg	Val	Ser	Leu	Pro	Glu	Asp	
	50					55			60						
Leu	Leu	Glu	Asp	Pro	Glu	Ile	Phe	Phe	Asp	Val	Val	Ser	Leu	Ser	Thr
65				70					75				80		
Trp	Gln	Glu	Val	Leu	Ser	Asp	Ser	Gln	Arg	Glu	His	Leu	Gln	Gln	Phe

[illegible]

515 520 525
 Thr Asp Tyr Val Val Arg Pro Ser Thr Gly Glu Glu Lys Arg Val Phe
 530 535 540
 Gln Glu Gln Glu Arg Tyr Arg Tyr Ser Gln Pro His Lys Ala Phe Thr
 545 550 555
 Phe Arg Met His Gly Phe Glu Ser Val Val Gly Pro Val Lys Gly Val
 565 570 575
 Phe Asp Lys Glu Thr Ser Leu Asn Lys Ala Arg Glu His Ser Leu Leu
 580 585 590
 Arg Ser Asp Arg Pro Ala Tyr Val Thr Ile Leu Ser Leu Val Arg Asp
 595 600 605
 Ala Ala Ala Arg Leu Pro Asn Gly Glu Gly Thr Arg Ala Glu Ile Cys
 610 615 620
 Glu Leu Leu Lys Asp Ser Gln Phe Leu Ala Pro Asp Val Thr Ser Thr
 625 630 635
 Gln Val Asn Thr Val Val Ser Gly Ala Leu Asp Arg Leu His Tyr Glu
 645 650 655
 Lys Asp Pro Cys Val Lys Tyr Asp Ile Gly Arg Lys Leu Trp Ile Tyr
 660 665 670
 Leu His Arg Asp Arg Ser Glu Glu Glu Phe Glu Arg Ile His Gln Ala
 675 680 685
 Gln Ala Ala Ala Ala Lys Ala Arg Lys Ala Leu Gln Gln Lys Pro Lys
 690 695 700
 Pro Pro Ser Lys Val Lys Ser Ser Ser Lys Glu Ser Ser Ile Lys Val
 705 710 715
 Leu Ser Ser Gly Pro Ser Glu Gln Ser Gln Met Ser Leu Ser Asp Ser
 725 730 735
 Ser Met Pro Pro Thr Pro Val Thr Pro Val Thr Pro Thr Thr Pro Ala
 740 745 750
 Leu Pro Ala Ile Pro Ile Ser Pro Pro Pro Val Ser Ala Val Asn Lys
 755 760 765
 Ser Gly Pro Ser Thr Val Ser Glu Pro Ala Lys Ser Ser Ser Gly Val
 770 775 780
 Leu Leu Val Ser Ser Pro Thr Met Pro His Leu Gly Thr Met Leu Ser
 785 790 795
 Pro Ala Ser Ser Gln Thr Ala Pro Ser Ser Gln Ala Ala Arg Val
 805 810 815
 Val Ser His Ser Gly Ser Ala Gly Leu Ser Gln Val Arg Val Val Ala
 820 825 830
 Gln Pro Ser Leu Pro Ala Val Pro Gln Gln Ser Gly Gly Pro Ala Gln
 835 840 845
 Thr Leu Pro Gln Met Pro Ala Gly Pro Gln Ile Arg Val Pro Ala Thr
 850 855 860
 Ala Thr Gln Thr Lys Val Val Pro Gln Thr Val Met Ala Thr Val Pro
 865 870 875
 Val Lys Ala Gln Thr Thr Ala Ala Thr Val Gln Arg Pro Gly Pro Gly
 885 890 895
 Gln Thr Gly Leu Thr Val Thr Ser Leu Pro Ala Thr Ala Ser Pro Val
 900 905 910
 Ser Lys Pro Ala Thr Ser Ser Pro Gly Thr Ser Ala Pro Ser Ala Ser
 915 920 925
 Thr Ala Ala Val Ile Gln Asn Val Thr Gly Gln Asn Ile Ile Lys Gln
 930 935 940
 Val Ala Ile Thr Gly Gln Leu Gly Val Lys Pro Gln Thr Gly Asn Ser

```

945          950          955          960
Ile Pro Leu Thr Ala Thr Asn Phe Arg Ile Gln Gly Lys Asp Val Leu
          965          970          975
Arg Leu Pro Pro Ser Ser Ile Thr Thr Asp Ala Lys Gly Gln Thr Val
          980          985          990
Leu Arg Ile Thr Pro Asp Met Met Ala Thr Leu Ala Lys Ser Gln Val
          995          1000          1005
Thr Thr Val Lys Leu Thr Gln Asp Leu Phe Gly Thr Gly Gly Asn Thr
          1010          1015          1020
Thr Gly Lys Gly Ile Ser Ala Thr Leu His Val Thr Ser Asn Pro Val
          1025          1030          1035          1040
His Ala Ala Asp Ser Pro Ala Lys Ala Ser Ser Ala Ser Ala Pro Ser
          1045          1050          1055
Ser Thr Pro Thr Gly Thr Thr Val Val Lys Val Thr Pro Asp Leu Lys
          1060          1065          1070
Pro Thr Glu Ala Ser Ser Ser Ala Phe Arg Leu Met Pro Ala Leu Gly
          1075          1080          1085
Val Ser Val Ala Asp Gln Lys Gly Lys Ser Thr Val Ala Ser Ser Glu
          1090          1095          1100
Ala Lys Pro Ala Ala Thr Ile Arg Ile Val Gln Gly Leu Gly Val Met
          1105          1110          1115          1120
Pro Pro Lys Ala Gly Gln Thr Ile Thr Val Ala Thr His Ala Lys Gln
          1125          1130          1135
Gly Ala Ser Val Ala Ser Gly Ser Gly Thr Val His Thr Ser Ala Val
          1140          1145          1150
Ser Leu Pro Ser Met Asn Ala Ala Val Ser Lys Thr Val Ala Val Ala
          1155          1160          1165
Ser Gly Ala Ala Ser Thr Pro Ile Ser Ile Ser Thr Gly Ala Pro Thr
          1170          1175          1180
Val Arg Gln Val Pro Val Ser Thr Thr Val Val Ser Thr Ser Gln Ala
          1185          1190          1195          1200
Gly Lys Leu Pro Thr Arg Ile Thr Val Pro Leu Ser Val Ile Ser Gln
          1205          1210          1215
Pro Met Lys Gly Lys Ser Val Val Thr Ala Pro Ile Ile Lys Gly Asn
          1220          1225          1230
Leu Gly Ala Asn Leu Ser Gly Leu Gly Arg Asn Ile Ile Leu Thr Thr
          1235          1240          1245
Met Pro Ala Gly Thr Lys Leu Ile Ala Gly Asn Lys Pro Val Ser Phe
          1250          1255          1260
Leu Thr Ala Gln Gln Leu Gln Gln Leu Gln Gln Gly Gln Ala Thr
          1265          1270          1275          1280
Gln Val Arg Ile Gln Thr Val Pro Ala Ser Xaa Leu Gln Gln Gly Thr
          1285          1290          1295
Ala Ser Gly Ser Ser Lys Ala Val Ser Thr Val Val Val Thr Thr Ala
          1300          1305          1310
Pro Ser Pro Lys Gln Ala Pro Glu Gln Gln
          1315          1320

```

<210> 4829

<211> 1605

<212> DNA

<213> Homo sapiens

<400> 4829

cccgagagc gaggacgacg tgaaggcgga gtggcgcccg gcgaggtagc gccaggcgag
60
ctggagacca tggccaaaat ggaggtgaaa acctcacttc tggacaatat gattggagtt
120
ggggatatgg ttctttttaga acctctcaat gaggagacct tcatcaacaa cctcaagaag
180
cgctttgacc acagtgaaat atacacttac attggaagtg tggttatatc tgtaaccca
240
tatcgggtctt taccatttta ttcaccagag aaagtggag aatacaggaa cagaaatttt
300
tatgaaactga gccctcacat ctttgccctt tcggatgaag catcacagatc cctacgagat
360
caagataagg accaatgtat tctcattact ggggaaagtg gagcaggaaa aacagaggcc
420
agtaagcttg tcatgtccta tgtggcagct gtttgtggaa aaggagcaga agttaatcaa
480
gttaaagaac agcttttaca gtccaacccg gtcctggaag cttttggaaa tgccaaaact
540
gtaaggaatg acaactcctc tagatttggc aaatatatgg atattgaatt tgactttaaa
600
ggcgatccac taggaggagt aataagtaac tatcttttag agaaatctcg ggttgtaaa
660
cagccaagag gtgaaagaaa cttccatgtg ttctatcagc tgctctctgg tgctctgaa
720
gagctcctca ataaacttaa gcttgagagg gatttcagca ggtataacta cctgagtctg
780
gattcgcca aagtgaatgg agtggatgat gcagcaaatt ttagaaccgt gcggaatgcc
840
atgcagattg tgggctttat ggatcatgaa gctgagtctg tcttggcggg ggtggcagca
900
gtgttgaaac tggggaacat tgagttcaag cccgaatctc gagtgaatgg tctagatgaa
960
agcaaatca aagataaaaa tgagttaaaa gaaatttgtg aattgaccgg cattgatcaa
1020
tcagttctag aacgagcatt cagtttccga acagttgagg ccaaacagga gaaagtttca
1080
actacactga atgtggctca ggcttattat gcccgatgat ctctggctaa aaacctctac
1140
agcaggttgt tttcatgggt ggtaaatcga atcaatgaaa gcattaaggc acaaacaaaa
1200
gtgagaaaga aggtcatggg tgttctggac atttatggct ttgagatttt cgaggacaac
1260
agctttgagc agttcattat taattattgt aacgaaaagc tgcaacaaat cttcattgaa
1320
cttactctta aagaagagca ggaggagtat atacgggagg atatagaatg gactcacatt
1380
gactacttca ataagtctat ctttgtgac ctaatagaaa ataacacaaa tggaatcctg
1440
gccatgttgg atgaagagt cctcagacct ggcacagtca ctgatgagac cttcttagaa
1500
aagctgaacc aagtatgtgc caccaccag cattttgaaa gcaggatgag caagtgtctt
1560
cggttcctca atgacacgtc tctgcctcac agctgcttca ggatc
1605

<210> 4830
 <211> 512
 <212> PRT
 <213> Homo sapiens

<400> 4830

```

Met Ala Lys Met Glu Val Lys Thr Ser Leu Leu Asp Asn Met Ile Gly
 1          5          10          15
Val Gly Asp Met Val Leu Leu Glu Pro Leu Asn Glu Glu Thr Phe Ile
 20          25          30
Asn Asn Leu Lys Lys Arg Phe Asp His Ser Glu Ile Tyr Thr Tyr Ile
 35          40          45
Gly Ser Val Val Ile Ser Val Asn Pro Tyr Arg Ser Leu Pro Ile Tyr
 50          55          60
Ser Pro Glu Lys Val Glu Glu Tyr Arg Asn Arg Asn Phe Tyr Glu Leu
 65          70          75          80
Ser Pro His Ile Phe Ala Leu Ser Asp Glu Ala Tyr Arg Ser Leu Arg
 85          90          95
Asp Gln Asp Lys Asp Gln Cys Ile Leu Ile Thr Gly Glu Ser Gly Ala
100          105          110
Gly Lys Thr Glu Ala Ser Lys Leu Val Met Ser Tyr Val Ala Ala Val
115          120          125
Cys Gly Lys Gly Ala Glu Val Asn Gln Val Lys Glu Gln Leu Leu Gln
130          135          140
Ser Asn Pro Val Leu Glu Ala Phe Gly Asn Ala Lys Thr Val Arg Asn
145          150          155          160
Asp Asn Ser Ser Arg Phe Gly Lys Tyr Met Asp Ile Glu Phe Asp Phe
165          170          175
Lys Gly Asp Pro Leu Gly Gly Val Ile Ser Asn Tyr Leu Leu Glu Lys
180          185          190
Ser Arg Val Val Lys Gln Pro Arg Gly Glu Arg Asn Phe His Val Phe
195          200          205
Tyr Gln Leu Leu Ser Gly Ala Ser Glu Glu Leu Leu Asn Lys Leu Lys
210          215          220
Leu Glu Arg Asp Phe Ser Arg Tyr Asn Tyr Leu Ser Leu Asp Ser Ala
225          230          235          240
Lys Val Asn Gly Val Asp Asp Ala Ala Asn Phe Arg Thr Val Arg Asn
245          250          255
Ala Met Gln Ile Val Gly Phe Met Asp His Glu Ala Glu Ser Val Leu
260          265          270
Ala Val Val Ala Ala Val Leu Lys Leu Gly Asn Ile Glu Phe Lys Pro
275          280          285
Glu Ser Arg Val Asn Gly Leu Asp Glu Ser Lys Ile Lys Asp Lys Asn
290          295          300
Glu Leu Lys Glu Ile Cys Glu Leu Thr Gly Ile Asp Gln Ser Val Leu
305          310          315          320
Glu Arg Ala Phe Ser Phe Arg Thr Val Glu Ala Lys Gln Glu Lys Val
325          330          335
Ser Thr Thr Leu Asn Val Ala Gln Ala Tyr Tyr Ala Arg Asp Ala Leu
340          345          350
Ala Lys Asn Leu Tyr Ser Arg Leu Phe Ser Trp Leu Val Asn Arg Ile
355          360          365
Asn Glu Ser Ile Lys Ala Gln Thr Lys Val Arg Lys Lys Val Met Gly

```

370	375	380
Val Leu Asp Ile Tyr Gly	Phe Glu Ile Phe Glu Asp Asn Ser Phe Glu	
385	390	395
Gln Phe Ile Ile Asn Tyr Cys Asn Glu Lys Leu Gln Gln Ile Phe Ile		400
	405	410
Glu Leu Thr Leu Lys Glu Glu Gln Glu Tyr Ile Arg Glu Asp Ile		415
	420	425
Glu Trp Thr His Ile Asp Tyr Phe Asn Asn Ala Ile Ile Cys Asp Leu		430
	435	440
Ile Glu Asn Asn Thr Asn Gly Ile Leu Ala Met Leu Asp Glu Glu Cys		445
	450	455
Leu Arg Pro Gly Thr Val Thr Asp Glu Thr Phe Leu Glu Lys Leu Asn		460
465	470	475
Gln Val Cys Ala Thr His Gln His Phe Glu Ser Arg Met Ser Lys Cys		480
	485	490
Ser Arg Phe Leu Asn Asp Thr Ser Leu Pro His Ser Cys Phe Arg Ile		495
	500	505
		510

<210> 4831

<211> 578

<212> DNA

<213> Homo sapiens

<400> 4831

cggacggtgg ccctcaaagg cccagtcacc aatgccgcca tcctgctggc gcccgtcagc
 60
 atgctgagct cagacttcag gccagcctg ccgctgcccc acttcaacaa gcacctgctg
 120
 ggcgccgagc acggggacga gccgcgccac gggggcctca ctctgcgcct gggcctccac
 180
 cagcagagcg tgctcggcgg ccaggaccag ctgcgcgtcc gtgtgacgga gctggaggac
 240
 gaggtgcgca acctgcgcaa gatcaatcgg gacctgttcg acttctccac gcgcttcac
 300
 acgcgccggg ccaagtggag cccggagacc cgggcccagag gcgcccaggc ctgagcccca
 360
 tgcctcccag caaccagggc ccgcggtgtt ggccccacc agcccaggcc tggactctcc
 420
 tcagttctgt gtcgtgttcg ggtttttctt ctgtgactgg gccgtcttgg tgtctcgtgg
 480
 cacgcgtcac agtgggtgcta gtctgttttt aacaaaagag gatgaaaagc caaaaaaaaa
 540
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 578

<210> 4832

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4832

Arg Thr Val Ala Leu Lys Gly Pro Val Thr Asn Ala Ala Ile Leu Leu	
1	15
Ala Pro Val Ser Met Leu Ser Ser Asp Phe Arg Pro Ser Leu Pro Leu	

```
<210> 4833
<211> 872
<212> DNA
<213> Homo sapiens
```

```
<210> 4834
<211> 147
<212> PRT
<213> Homo sapiens
```

<400> 4834

```

Met Thr His Gln Asp Leu Ser Ile Thr Ala Lys Leu Ile Asn Gly Gly
 1           5           10           15
Val Ala Gly Leu Val Gly Val Thr Cys Val Phe Pro Ile Asp Leu Ala
      20           25           30
Lys Thr Arg Leu Gln Asn Gln His Gly Lys Ala Met Tyr Lys Gly Met
      35           40           45
Ile Asp Cys Leu Met Lys Thr Ala Arg Ala Glu Gly Phe Phe Gly Met
      50           55           60
Tyr Arg Gly Ala Ala Val Asn Leu Thr Leu Val Thr Pro Glu Lys Ala
      65           70           75           80
Ile Lys Leu Ala Ala Asn Asp Phe Phe Arg Arg Leu Leu Met Glu Asp
      85           90           95
Gly Met Gln Arg Asn Leu Lys Met Glu Met Leu Ala Gly Cys Gly Ala
      100          105          110
Gly Met Cys Gln Val Val Val Thr Cys Pro Met Glu Met Leu Lys Ile
      115          120          125
Gln Leu Gln Ala Cys Trp Thr Pro Gly Arg Pro Ser Ser Gly Leu Gly
      130          135          140
Leu Ser Thr
145

```

<210> 4835

<211> 1846

<212> DNA

<213> Homo sapiens

<400> 4835

```

nctcatttcc gaagtgcctt gacagccac cctgtgcgtg accctgtgca catgtaccag
60
ctgcacaaag ctttcgccc agctgaactg gaacgcacgt accaggagat ccaggagtta
120
cagtgggaga tccagaatac cagccatctg gccgttgatg gggaccgggc agctgcttgg
180
cccgtgggta ttccagcacc atcccgcccg gcctcccgct ttgaggtgct gcgctgggac
240
tacttcacgg agcagcacgc tttctcctgc gccgatggct caccocgctg cccactgcgt
300
ggggctgacc gggctgatgt ggccgatgtt ctggggacag ctctagagga gctgaaccgc
360
cgctaccacc cggccttgcg gctccagaag cagcagctgg tgaatggcta ccgacgcttt
420
gatccggccc ggggtatgga atacacgctg gacttgcagc tggaggcact gacccccag
480
ggaggccgcc ggcccctcac tcgccgagtg cagctgctcc ggccgctgag ccgctggag
540
atcttgccctg tgccctatgt cactgaggcc tcacgtctca ctgtgctgct gcctctagct
600
gcggctgagc gtgacctggc ccctggcttc ttggaggcct ttgccactgc agcactggag
660
cctggtgatg ctgcggcagc cctgaccctg ctgctactgt atgagccgcg ccaggcccag
720
cgcgtaggcc atgcagatgt cttcgcacct gtcaaggccc acgtggcaga gctggagcgg
780

```

cgtttccccg gtgcccgggt gccatggctc agtgtgcaga cagccgcacc ctcaccactg
 840
 cgcctcatgg atctactctc caagaagcac ccgctggaca cactgttctt gctggccggg
 900
 ccagacacgg tgctcacgcc tgacttcctg aaccgctgcc gcatgcatgc catctccggc
 960
 tggcaggcct tctttcccat gcatttccaa gccttccacc cagctgtggc cccaccacaa
 1020
 gggcctgggc cccagagct ggggccgtga cactggccgc tttgatcgcc aggcagccag
 1080
 cgaggcctgc ttctacaact ccgactacgt ggcagcccggt gggcgccctgg gcgcagctca
 1140
 gaacaagaag aggagctgct ggagagcctg gatgtgtacg agctgttctt ccacttctcc
 1200
 agtctgcatg tgctgcgggc ggtggagcgg cgctgctgca gccgctaccg ggcccagacg
 1260
 tgcagcgcga ggctcagtga ggacctgtac caccgctgcc tccagagcgt gcttgagggc
 1320
 ctgggctccc gaaccagct ggccatgcta ctctttgaac aggagcaggg caacagcacc
 1380
 tgaccccacc ctgtccccgt gggcccgtgg cattggccac accccacccc acttctcccc
 1440
 caaaaccaga gccacctgcc agcctcgctg ggcagggctg gccgtagcca gaccccaagc
 1500
 tggcccactg gtcccctctc tggctctgtg ggtccctggg ctctggacaa gcactggggg
 1560
 acgtgcccc agagccaccc acttctcatc ccaaaccag tttccctgcc ccctgacgt
 1620
 gctgattcgg gctgtggcct ccacgtattt atgcagtaca gtctgctga cgccagcct
 1680
 gcctctgggc cctgggggct gggctgtaga agagtgttg gggaaggagg gagctgagga
 1740
 gggggcatct cccaacttct cccttttga cctgcccga gctccctgcc tttataaac
 1800
 tggccaagtg tggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
 1846

<210> 4836

<211> 349

<212> PRT

<213> Homo sapiens

<400> 4836

Xaa	His	Phe	Arg	Ser	Ala	Leu	Thr	Ala	His	Pro	Val	Arg	Asp	Pro	Val
1				5				10						15	
His	Met	Tyr	Gln	Leu	His	Lys	Ala	Phe	Ala	Arg	Ala	Glu	Leu	Glu	Arg
			20				25					30			
Thr	Tyr	Gln	Glu	Ile	Gln	Glu	Leu	Gln	Trp	Glu	Ile	Gln	Asn	Thr	Ser
		35				40					45				
His	Leu	Ala	Val	Asp	Gly	Asp	Arg	Ala	Ala	Ala	Trp	Pro	Val	Gly	Ile
	50				55					60					
Pro	Ala	Pro	Ser	Arg	Pro	Ala	Ser	Arg	Phe	Glu	Val	Leu	Arg	Trp	Asp
65				70				75					80		
Tyr	Phe	Thr	Glu	Gln	His	Ala	Phe	Ser	Cys	Ala	Asp	Gly	Ser	Pro	Arg

```
<210> 4837
<211> 906
<212> DNA
<213> Homo sapiens
```

```

<400> 4837
naggggggagg agggaggaggt ggtggcagcc tttgggaaga aggagtccca ggaggaagag
60
gaggaagaag acagtgacga aggggaaaga acaattgaaa ctgcaaaagg gattaatgga
120
actgtaaatt atgatagtgt caattctgac aactctaagc caaagatatatt taaaagtcaa
180
atagagaaca taaatttgac caatggcagc aatggggagga acacagagtc cccagctgcc
240
attcaccctt gtggaaatcc tacagtgatt gaggacgctt tggacaagat taaaagcaat
300
gaccctgaca ccacagaagt caatttgaac aacattgaga acatcacaac acagaccctt
360
accgcctttg ctgaagccct caaggacaac actgtgtgta agacgttcag tctggccaac
420

```

acgcatgccg acgacagtgc agccatggcc attgcagaga tgctcaaagt caatgagcac
 480
 atcaccaacg taaacgtcga gtccaacttc ataacgggaa aggggatcct ggccatcatg
 540
 agagctctcc agcacaacac ggtgctcacg gagctgcgtt tccataacca gaggcacatc
 600
 atgggcagcc aggtggaaat ggagattgtc aagctgctga aggagaacac gacgctgctg
 660
 aggctgggat accattttga actcccagga ccaagaatga gcatgacgag cattttgaca
 720
 agaaatatgg ataaacagag gcaaaaacgt ttgcaggagc aaaaacagca ggaggggatac
 780
 gatggaggac ccaatcttag gaccaaagtc tggcaaagag gaacacctag cccttccctc
 840
 tatgtatctc ccaggcactc accgtggtca tccccaaaac tcccctacgg agagacgaca
 900
 acgcgt
 906

<210> 4838

<211> 302

<212> PRT

<213> Homo sapiens

<400> 4838

Xaa	Gly	Glu	Glu	Glu	Glu	Val	Val	Ala	Ala	Phe	Gly	Lys	Lys	Glu	Ser
1				5				10						15	
Gln	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Ser	Asp	Glu	Gly	Glu	Arg	Thr	Ile
			20				25						30		
Glu	Thr	Ala	Lys	Gly	Ile	Asn	Gly	Thr	Val	Asn	Tyr	Asp	Ser	Val	Asn
		35				40					45				
Ser	Asp	Asn	Ser	Lys	Pro	Lys	Ile	Phe	Lys	Ser	Gln	Ile	Glu	Asn	Ile
	50					55				60					
Asn	Leu	Thr	Asn	Gly	Ser	Asn	Gly	Arg	Asn	Thr	Glu	Ser	Pro	Ala	Ala
65				70				75						80	
Ile	His	Pro	Cys	Gly	Asn	Pro	Thr	Val	Ile	Glu	Asp	Ala	Leu	Asp	Lys
			85					90					95		
Ile	Lys	Ser	Asn	Asp	Pro	Asp	Thr	Thr	Glu	Val	Asn	Leu	Asn	Asn	Ile
			100				105						110		
Glu	Asn	Ile	Thr	Thr	Gln	Thr	Leu	Thr	Arg	Phe	Ala	Glu	Ala	Leu	Lys
		115					120					125			
Asp	Asn	Thr	Val	Val	Lys	Thr	Phe	Ser	Leu	Ala	Asn	Thr	His	Ala	Asp
	130					135					140				
Asp	Ser	Ala	Ala	Met	Ala	Ile	Ala	Glu	Met	Leu	Lys	Val	Asn	Glu	His
145				150				155						160	
Ile	Thr	Asn	Val	Asn	Val	Glu	Ser	Asn	Phe	Ile	Thr	Gly	Lys	Gly	Ile
			165					170						175	
Leu	Ala	Ile	Met	Arg	Ala	Leu	Gln	His	Asn	Thr	Val	Leu	Thr	Glu	Leu
			180					185						190	
Arg	Phe	His	Asn	Gln	Arg	His	Ile	Met	Gly	Ser	Gln	Val	Glu	Met	Glu
	195					200						205			
Ile	Val	Lys	Leu	Leu	Lys	Glu	Asn	Thr	Thr	Leu	Leu	Arg	Leu	Gly	Tyr
	210					215						220			
His	Phe	Glu	Leu	Pro	Gly	Pro	Arg	Met	Ser	Met	Thr	Ser	Ile	Leu	Thr

225		230		235		240									
Arg	Asn	Met	Asp	Lys	Gln	Arg	Gln	Lys	Arg	Leu	Gln	Glu	Gln	Lys	Gln
			245			250								255	
Gln	Glu	Gly	Tyr	Asp	Gly	Gly	Pro	Asn	Leu	Arg	Thr	Lys	Val	Trp	Gln
		260				265							270		
Arg	Gly	Thr	Pro	Ser	Pro	Ser	Pro	Tyr	Val	Ser	Pro	Arg	His	Ser	Pro
		275				280						285			
Trp	Ser	Ser	Pro	Lys	Leu	Pro	Tyr	Gly	Glu	Thr	Thr	Thr	Arg		
	290				295						300				

<210> 4839

<211> 1313

<212> DNA

<213> Homo sapiens

<400> 4839

```

nnggcgctca gggccccac aagaggtcga ggaatgttg tgggctggg cacaccagca
60
cggcagaaac tggagaaagc gagagacgtc gccagggacc cagggacctc tccctccagt
120
tccccgggccc cgccccggccc tgatggccac tcacgctata gcgcccactc tgtcctgggc
180
catcccgccg cagcagtgtg gccccagacc cgggcgcctg aatgctctcc ctccggatcg
240
ctgctcgggt cccactttg gcgaccgntg ccccgagtc ctgcttcccc ggggcctgct
300
ctgtatcagg cgctgcgcc ttcaagggtg cccggccgc ctgccctccc caagagccga
360
gtttgcgtc ctcccggaat cgtttgagag aaggacaaac ttttggcagg atggaaatct
420
agatgagcct gtccggagca gaacaccctt gattagccag gccaccgcc atccacatct
480
gctcgcaaaa gaaggaaggc agcttgttcc agaccttggg gagcagctgc agactgcctg
540
cctagaacag cctccttact ccagcctggc agggaaggaa ggaacctgac ttgcttcgca
600
ggatctggaa gctcagccgg cagagctgag agccgcagtt gcatcctgga gcctgatgct
660
agaagcagct tccgtctttg ggttcttgct gcctcggcct ctgctctggt cagtttgctg
720
ttgtgttttt ctcccccatg ttgggttggt ggggtacagg gaaataaaat gctttctccc
780
aggccccata tcttcccca tgctccatc agcctcaaag ctgctgacag tcatgaactg
840
caccttccag ccctgcccac aagctactca aagcaaattc aaattctctt ctggccaggg
900
ggaagggcag atgctccctc cttcctcaag cctccctggc tcattgatcc attttgaggg
960
catttggggg tcaaagtga gaccagattg cttcagtttg tataaaatta gcatttctta
1020
tcacaccaag gccacacctg ttctctggcc tcacaaacca gtgaggatgt aaaggtttgt
1080
tgaggtggag gaacagaagt gaaatgagca atctgctcca tttagaagtc agtcgcttcg
1140

```


gctgttcatt ccactaatat ttatctagta cctattctgt gccaaagcatt gtctctacct
 1200
 cagtttgcca caaatatgaa aaaaaaaaaa ttcttggaac tgtgaggctt caatgtgttg
 1260
 tggaccaata tacaaataaa ccaatggaaa agaaaaaaaa aaaaaaaaaa aaa
 1313

<210> 4840

<211> 66

<212> PRT

<213> Homo sapiens

<400> 4840

Xaa Ala Leu Arg Ala Pro Thr Arg Gly Arg Gly Asn Val Val Gly Trp
 1 5 10 15
 Gly Thr Pro Ala Arg Gln Lys Leu Glu Lys Ala Arg Asp Val Ala Arg
 20 25 30
 Asp Pro Gly Thr Ser Pro Ser Ser Ser Pro Gly Pro Pro Gly Pro Asp
 35 40 45
 Gly His Ser Arg Tyr Ser Ala His Ser Val Leu Gly His Pro Ala Pro
 50 55 60
 Ala Val
 65

<210> 4841

<211> 558

<212> DNA

<213> Homo sapiens

<400> 4841

acgcgtgcga gtgtgaggac tcagtggacg acggcgggcg cggcgaaagc ggatgaagac
 60
 cccggagcca acttgtttcc gccgcccgtg ccccgacccc ggatctgcat gtggaagtac
 120
 ctggagctcc attccatgca ccagctggag aagaccacca atgctgagat gagggaggtg
 180
 ctggctgagc tgctggagct aggggtgcct gagcagagcc tgagggacgc catcacctg
 240
 gacctcttct gccacgcgt cttttctg cgcagcagg gcttctcact ggagcagacg
 300
 tcagcgggct gtgccctgct ccaggatctt cacaaggctt gtattggcca catccacgtc
 360
 ctccgagcct acatcaagac ccaagtgaac aaagagctgg agcagctcca ggggctgggtg
 420
 gaggagcgt caaggccagc gaggaaggc tcagcagcaa gttgactgca ctagagcggc
 480
 ccttccagct actccgggta aaggcaagag caagaccaag tgaccccaaa cttttcccc
 540
 aataaaggctc tgggccag
 558

<210> 4842

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4842

```

Met Trp Lys Tyr Leu Asp Val His Ser Met His Gln Leu Glu Lys Thr
 1           5           10           15
Thr Asn Ala Glu Met Arg Glu Val Leu Ala Glu Leu Leu Glu Leu Gly
      20           25           30
Cys Pro Glu Gln Ser Leu Arg Asp Ala Ile Thr Leu Asp Leu Phe Cys
      35           40           45
His Ala Leu Ile Phe Cys Arg Gln Gln Gly Phe Ser Leu Glu Gln Thr
      50           55           60
Ser Ala Ala Cys Ala Leu Leu Gln Asp Leu His Lys Ala Cys Ile Gly
      65           70           75           80
His Ile His Val Leu Arg Ala Tyr Ile Lys Thr Gln Val Asn Lys Glu
      85           90           95
Leu Glu Gln Leu Gln Gly Leu Val Glu Glu Arg Ser Arg Pro Ala Arg
      100          105          110
Lys Gly Ser Ala Ala Ser
      115

```

<210> 4843

<211> 6403

<212> DNA

<213> Homo sapiens

<400> 4843

```

ggcacgagct gtaggagcag gggcctagca agcgcccagc ggagcgaccc ctgcctggcc
60
gtggctagca tggcccctac gctgttccag aagctcttca gcaagaggac cgggctgggc
120
gcgcccggcc gcgacgcccg ggaccagat tgcggggttca gttggccttt accagagttt
180
gatccaagcc agattcgact gattgtatat caagactgtg aaagacgagg gagaaatgtt
240
ttgtttgact ccagtgttaa gagaagaaat gaggacatat cagtatcgga cttaaatact
300
atttattctt atcttcatgg aatggaaata ttatcaaata tcagggaaca tcagcttaga
360
ttaatgtctg caagagcacg ctatgagaga tacagtggca atcagggttct cttttgttca
420
gaaacgattg ccagatgttg gtatatccta ctttctggat ctgtgcttgt gaaaggctcc
480
atggtcttgc ctcttgcag ttttggttaag cagtttggag gaaaaagagg atgtgattgt
540
cttgtattag agccttcaga aatgattgtg gtagagaatg ccaaagataa tgaagatagt
600
attctacaaa gagaaattcc tgccagacaa tcccgaagaa gatttcggaa aattaactat
660
aaaggagagc gccaaacat tactgatgat gtggagggtta acagctatct ttctcttcca
720
gctgatctta ccaagatgca tctcacagaa aaccctcatc cacaggtgac tcatgtgtct
780
tctagtcagt ctggtttag cattgccagt gactctggaa gcagcagttt atctgatatc
840

```

tatcaggcta cggagagtga ggtaggagat gtagatttga cacgtcttcc agaaggacct
900
gttgattctg aggatgacga agaggaagat gaagagattg atcgaacaga tccattgcag
960
gggcgagatc ttgttcgaga atgtcttgaa aaagaacctg cagacaaaac tgatgatgac
1020
attgaacaat tgctggagtt tatgcaccag ctccctgcat ttgcaaacat gaccatgtct
1080
gtaaggagag aactctgctc agtgatgatt tttgaagtgg tagagcaggc tggagctatt
1140
attcttgaag atgggcaaga gcttgactca tggtatgtta ttttaaaccg cactgtggaa
1200
atcagtcacg cagatggaaa agttgaaaat ttgtttatgg gaaatagttt tggaattact
1260
cccactctgg ataagcagta catgcatgga attgtcagga ctaaagtaga tgattgtcag
1320
tttgtctgca tagcccagca agattattgg agaattttta accatgtgga aaaaaatacc
1380
cataaagttg aggaagaggg agaaattggt atggtacatg agcatcggga actagaccgg
1440
agtgaacca ggaaaggaca cattgtgatc aaggcaacac ctgagcgtct cataatgcat
1500
ttaatagaag aacattccat cgtggatcca acttatatag aagattttct attaacttac
1560
aggacatttc ttgaaagtcc tttggatggt gggatcaaac tattggaatg gtttaagatc
1620
gacagcttaa gagataaggt gacacggatt gtattattat gggtaaataa tcattttaat
1680
gattttgaag gtgacctgc tatgactcga tttctagagg aatttgaaaa aaatctggaa
1740
gatacaaaga tgaatggtca tctccggtta ttgaatattg cctgtgctgc aaaggctaag
1800
tgagacagg ttgtgctgca aaaggcttcc cgcgagtccc ctctacaatt cagccttaat
1860
ggagggagtg agaagggtt tgggtattttt gttgaaggag tagaacctgg tagcaaagct
1920
gctgattcag gactgaaacg tggatgatcag attatggaag taaatggaca aaactttgag
1980
aatattacat ttatgaaagc cgttgaaatt ttgaggaata atactcatct tgcacttact
2040
gtgaagacca acatttttgt gttcaaagag ttacttttta ggactgaaca agagaaatct
2100
ggtgttcctc atattcccaa aattgctgaa aaaaaagta atcgccattc tatccagcat
2160
gtgccaggag atattgaaca gacatcacag gagaaaggaa gtaagaaagt taaagcaaat
2220
actgtttcag gtggaagaaa caaatcagg aagatttttg ataaaacacg atttagtata
2280
ttgcctcaa agctatttag tgatggaggc ctaagccaat cacaagatga cagcattgtg
2340
ggaacaaggc actgtaggca tagtctggct ataatgccca tccctggaac actctcatcc
2400
agcagccctg atctctgca gcctaccacc agtatgttgg atttttccaa tccttcagat
2460

atccctgac aagttataag agttttcaaa gtggatcagc aaagttgcta cattatcatc
2520
agtaaagaca ccacagctaa agaagtagtt tttcatgctg ttcattgaatt tggtttgacc
2580
ggtgcacccg acacatattc tctctgtgaa gtttctgtta ctcctgaggg tgtcataaaa
2640
cagagaagac ttccagatca gttctccaaa ttagctgata gaattcaact caatggaagg
2700
tattacttaa aaaataacat ggaaacagaa accttatgtt cagatgaaga tgctcaagaa
2760
ctagttaagg aaagccagct atccatgctg cagctcagta ccattgaggt ggccaccag
2820
ctgtcaatga gggactttga tttgtttcgt aatattgaac cgactgagta catcgatgac
2880
ctttttaagt taaattccaa aacaggaaat actcatttga agaggtttga ggacatttga
2940
aaccaagaga cattctgggt tgcctcagaa attttaactg aagcaaatca gctcaaacga
3000
atgaagatta ttaagcattt tattaataatt gcacttcatt gtcgagaatg taagaacttc
3060
aattccatgt ttgcaataat aagtggcttg aacctggcat ctgtagcaag actcagagga
3120
acttgggaaa agttaccaag caaatacgag aaacatcttc aagatctaca agacattttt
3180
gatccatcta gaaacatggc aaagtataga aatattctta gtagtcaaag tatgcagcct
3240
ccaattattc cactcttccc tgttgtaag aaagatatga catttctaca tgaaggaaat
3300
gactccaaag tagatggttt agtaaaacttt gagaagttaa gaatgatttc caaggaaatc
3360
cgccaagttg ttcgaatgac ttctgctaag atggaccag ctatgatgtt tcgacagagg
3420
tcaactgagtc aaggaagcac aaattcaaac atgctggatg ttcagggagg tgctcacaaa
3480
aaaagggcac gccgcagctc tctgcttaat gccagaagc tatatgagga tgcccaaagt
3540
gcaaggaagg tgaagcagta tctttccagt ctcgatgtag agacagatga ggagaagttc
3600
cagatgatgt cattacagtg ggagcctgca tatggtacct tgaccaagaa ttttaagtga
3660
aaaagatcag ccaagnnatc atctgaaatg tctccagtgc ctatgaggtc agctggccaa
3720
acaactaaag ccacttgca tcaacccac agagtaagcc aggtgcttca ggtgccagct
3780
gttaatttgc acccatcag gaagaaggga caaacaaaag accctgcact gaatacaagt
3840
ttacctcaga aagttttagg aacaactgaa gaaataagt gtaagaagca tacagaagac
3900
actatttctg tggcgatc tttacattct agtcctctg catctctca aggtccctc
3960
cacaaggtt acacacttat tccatcagct aaatctgaca acttgtctga ctccagccat
4020
agtgaattt ctacaggtc cagcatcgtg agcaattgtt ctgttgactc catgtctgca
4080

gctctacagg atgaacggtg ttcctctcag gccctggcag tccctgaatc cactggggca
4140
ttggaaaaga cagagcacgc ttcagggata ggagatcata gtcaacatgg ccctgggtgg
4200
acactcttga agccatctct aatcaagtgt ttagctgtct catcgtctgt gagcaatgaa
4260
gagatttctc aagagcatat cattatagaa gcagctgaca gtggctgtgg aagttggact
4320
tcgtgttcaa gcagctccca tgacaacttc caaagccttc caaaccocaaa aagctgggat
4380
tttttgaact cttacagaca taccatttg gatgacccca ttgtgaagt tgaaccact
4440
gactctgagc cctattcctg ttctaaaage tgctctagaa cttgtgggca gtgtaaagga
4500
agcctagaga gaaagagttg gacctcctcc agttctctgt ctgacacgta tgaaccaaac
4560
tatgggacag ttaaacggag agtattggag agcaccocag ctgagtcac tgaaggcttg
4620
gaccocaaag atgccactga cccagtttat aaaactgtca cttcaagtac agaaaagggc
4680
ttgattgtgt actgtgtcac ctaccccaag aaggacgata ggtatagga gccacctccc
4740
actcctccag gatatttggg gatttcttta gcggacctaa aggaaggacc ccacacacac
4800
ctaaaacctc cagattatag tgtggcagtg cagaggtcaa agatgatgca taacagcctc
4860
tctagactgc caccagcttc tctcagtagc aacctcgagg cctgtgttcc atcgaagatt
4920
gtaactcagc ctcagaggca taatttgcag ccattccatc ctaaactagg agatgtgact
4980
gatgcagata gcgaagcaga tgaaaatgaa caagtttcag cagtctagcc tttggatgac
5040
ctatttgaac accactgaaa gtcgtggagg aatgggcaag aaccacctca tgattctgca
5100
ggccattgct aacgaacagc tcattgctac aaccagtcca gaggttttat tccctctact
5160
ccgagcaatg aaatagacct gagttatgct tcctttcatt taatttctgc agataaatag
5220
tttctgagc aatggatgct atgcctggat accagtctcc actttgcacg ccggaactgc
5280
cttgggacca cagttacaga aaaaatgtaa actcagagtg atccttgtgt atattgctat
5340
agatttttct ttaacaagct attttaaaga taatggcatt attatttcca agccatagct
5400
tgggctgaag gacaaattga aattgtctgc caataccaag gatattctta tatatttgaa
5460
aaataactta ttatttgaat tgttgtggtt ttgtttgtat ttgagagctc ttgttagctg
5520
atattcatgt ttgaggtcat aaaattgtct ctggctctgac caaacagaag tcatctttac
5580
agaggtgata tgcttgatct acacagagat gtgacttgat ctgtagcacc aatgcaatgt
5640
aggtctcagt ttgagagaaa taggaagccc tttgcagttg aggtgttagg aacctgctgg
5700

tcatggtgtg gaaggccaaa tgaagctgcc acaggggttc ttgtcagtc tttgggaaat
 5760
 gggagggagt agtttgggga ggaggggtggg aaccctaatt tccacagaat gaaattttga
 5820
 tgttaaatga catgtataca aattcttctt taagtgaag ttatgctgca tcgaattgta
 5880
 actgaaagta tagatccaac aaatagagac tgggttctag agagttctgg tctatagaaa
 5940
 cccaaaacta aaatctctca taactcaagt atggaatact ttttttaaag aaattcttat
 6000
 catgggtgtt gtaataatga agacgaatgt gactttatgc agtggtctgc agcatgcctc
 6060
 ccccatct catagcacca ggttgtgtct gacctgacat accctgcagc tctcagctgg
 6120
 ctgcagtaac attttgtggg agaaagagga gctggagtta cagaaatgat tgtctcttgg
 6180
 ttctcagttt ttagcccttg agaggacata cttttccagc ctcatgggta tggcactctt
 6240
 aattaaaatt tcagtgactg tttactggat gaggcagatt tttcacattt ttgcaaatta
 6300
 aatatatttt atatatatta agtttaattt tttcagtttt tttaatgtaa aagcaagtga
 6360
 aattttaata aacttctgta attaccaaaa aaaaaaaaaa aaa
 6403

<210> 4844

<211> 1675

<212> PRT

<213> Homo sapiens

<400> 4844

Gly Thr Ser Cys Arg Ser Arg Gly Leu Ala Ser Ala Gln Arg Ser Asp
 1 5 10 15
 Pro Cys Leu Ala Val Ala Ser Met Ala Pro Thr Leu Phe Gln Lys Leu
 20 25 30
 Phe Ser Lys Arg Thr Gly Leu Gly Ala Pro Gly Arg Asp Ala Arg Asp
 35 40 45
 Pro Asp Cys Gly Phe Ser Trp Pro Leu Pro Glu Phe Asp Pro Ser Gln
 50 55 60
 Ile Arg Leu Ile Val Tyr Gln Asp Cys Glu Arg Arg Gly Arg Asn Val
 65 70 75 80
 Leu Phe Asp Ser Ser Val Lys Arg Arg Asn Glu Asp Ile Ser Val Ser
 85 90 95
 Asp Leu Asn Thr Ile Tyr Ser Tyr Leu His Gly Met Glu Ile Leu Ser
 100 105 110
 Asn Leu Arg Glu His Gln Leu Arg Leu Met Ser Ala Arg Ala Arg Tyr
 115 120 125
 Glu Arg Tyr Ser Gly Asn Gln Val Leu Phe Cys Ser Glu Thr Ile Ala
 130 135 140
 Arg Cys Trp Tyr Ile Leu Leu Ser Gly Ser Val Leu Val Lys Gly Ser
 145 150 155 160
 Met Val Leu Pro Pro Cys Ser Phe Gly Lys Gln Phe Gly Gly Lys Arg
 165 170 175
 Gly Cys Asp Cys Leu Val Leu Glu Pro Ser Glu Met Ile Val Val Glu

										180					185					190				
Asn	Ala	Lys	Asp	Asn	Glu	Asp	Ser	Ile	Leu	Gln	Arg	Glu	Ile	Pro	Ala									
										195					200					205				
Arg	Gln	Ser	Arg	Arg	Arg	Phe	Arg	Lys	Ile	Asn	Tyr	Lys	Gly	Glu	Arg									
										210					215					220				
Gln	Thr	Ile	Thr	Asp	Asp	Val	Glu	Val	Asn	Ser	Tyr	Leu	Ser	Leu	Pro									
										225					230					235				
Ala	Asp	Leu	Thr	Lys	Met	His	Leu	Thr	Glu	Asn	Pro	His	Pro	Gln	Val									
										245					250					255				
Thr	His	Val	Ser	Ser	Ser	Gln	Ser	Gly	Cys	Ser	Ile	Ala	Ser	Asp	Ser									
										260					265					270				
Gly	Ser	Ser	Ser	Leu	Ser	Asp	Ile	Tyr	Gln	Ala	Thr	Glu	Ser	Glu	Val									
										275					280					285				
Gly	Asp	Val	Asp	Leu	Thr	Arg	Leu	Pro	Glu	Gly	Pro	Val	Asp	Ser	Glu									
										290					295					300				
Asp	Asp	Glu	Glu	Glu	Asp	Glu	Glu	Ile	Asp	Arg	Thr	Asp	Pro	Leu	Gln									
										305					310					315				
Gly	Arg	Asp	Leu	Val	Arg	Glu	Cys	Leu	Glu	Lys	Glu	Pro	Ala	Asp	Lys									
										325					330					335				
Thr	Asp	Asp	Asp	Ile	Glu	Gln	Leu	Leu	Glu	Phe	Met	His	Gln	Leu	Pro									
										340					345					350				
Ala	Phe	Ala	Asn	Met	Thr	Met	Ser	Val	Arg	Arg	Glu	Leu	Cys	Ser	Val									
										355					360					365				
Met	Ile	Phe	Glu	Val	Val	Glu	Gln	Ala	Gly	Ala	Ile	Ile	Leu	Glu	Asp									
										370					375					380				
Gly	Gln	Glu	Leu	Asp	Ser	Trp	Tyr	Val	Ile	Leu	Asn	Gly	Thr	Val	Glu									
										385					390					395				
Ile	Ser	His	Pro	Asp	Gly	Lys	Val	Glu	Asn	Leu	Phe	Met	Gly	Asn	Ser									
										405					410					415				
Phe	Gly	Ile	Thr	Pro	Thr	Leu	Asp	Lys	Gln	Tyr	Met	His	Gly	Ile	Val									
										420					425					430				
Arg	Thr	Lys	Val	Asp	Asp	Cys	Gln	Phe	Val	Cys	Ile	Ala	Gln	Gln	Asp									
										435					440					445				
Tyr	Trp	Arg	Ile	Leu	Asn	His	Val	Glu	Lys	Asn	Thr	His	Lys	Val	Glu									
										450					455					460				
Glu	Glu	Gly	Glu	Ile	Val	Met	Val	His	Glu	His	Arg	Glu	Leu	Asp	Arg									
										465					470					475				
Ser	Gly	Thr	Arg	Lys	Gly	His	Ile	Val	Ile	Lys	Ala	Thr	Pro	Glu	Arg									
										485					490					495				
Leu	Ile	Met	His	Leu	Ile	Glu	Glu	His	Ser	Ile	Val	Asp	Pro	Thr	Tyr									
										500					505					510				
Ile	Glu	Asp	Phe	Leu	Leu	Thr	Tyr	Arg	Thr	Phe	Leu	Glu	Ser	Pro	Leu									
										515					520					525				
Asp	Val	Gly	Ile	Lys	Leu	Leu	Glu	Trp	Phe	Lys	Ile	Asp	Ser	Leu	Arg									
										530					535					540				
Asp	Lys	Val	Thr	Arg	Ile	Val	Leu	Leu	Trp	Val	Asn	Asn	His	Phe	Asn									
										545					550					555				
Asp	Phe	Glu	Gly	Asp	Pro	Ala	Met	Thr	Arg	Phe	Leu	Glu	Glu	Phe	Glu									
										565					570					575				
Lys	Asn	Leu	Glu	Asp	Thr	Lys	Met	Asn	Gly	His	Leu	Arg	Leu	Leu	Asn									
										580					585					590				
Ile	Ala	Cys	Ala	Ala	Lys	Ala	Lys	Trp	Arg	Gln	Val	Val	Leu	Gln	Lys									
										595					60									

610 615 620
 Lys Gly Phe Gly Ile Phe Val Glu Gly Val Glu Pro Gly Ser Lys Ala
 625 630 635 640
 Ala Asp Ser Gly Leu Lys Arg Gly Asp Gln Ile Met Glu Val Asn Gly
 645 650 655
 Gln Asn Phe Glu Asn Ile Thr Phe Met Lys Ala Val Glu Ile Leu Arg
 660 665 670
 Asn Asn Thr His Leu Ala Leu Thr Val Lys Thr Asn Ile Phe Val Phe
 675 680 685
 Lys Glu Leu Leu Phe Arg Thr Glu Gln Glu Lys Ser Gly Val Pro His
 690 695 700
 Ile Pro Lys Ile Ala Glu Lys Lys Ser Asn Arg His Ser Ile Gln His
 705 710 715 720
 Val Pro Gly Asp Ile Glu Gln Thr Ser Gln Glu Lys Gly Ser Lys Lys
 725 730 735
 Val Lys Ala Asn Thr Val Ser Gly Gly Arg Asn Lys Ile Arg Lys Ile
 740 745 750
 Leu Asp Lys Thr Arg Phe Ser Ile Leu Pro Pro Lys Leu Phe Ser Asp
 755 760 765
 Gly Gly Leu Ser Gln Ser Gln Asp Asp Ser Ile Val Gly Thr Arg His
 770 775 780
 Cys Arg His Ser Leu Ala Ile Met Pro Ile Pro Gly Thr Leu Ser Ser
 785 790 795 800
 Ser Ser Pro Asp Leu Leu Gln Pro Thr Thr Ser Met Leu Asp Phe Ser
 805 810 815
 Asn Pro Ser Asp Ile Pro Asp Gln Val Ile Arg Val Phe Lys Val Asp
 820 825 830
 Gln Gln Ser Cys Tyr Ile Ile Ile Ser Lys Asp Thr Thr Ala Lys Glu
 835 840 845
 Val Val Phe His Ala Val His Glu Phe Gly Leu Thr Gly Ala Ser Asp
 850 855 860
 Thr Tyr Ser Leu Cys Glu Val Ser Val Thr Pro Glu Gly Val Ile Lys
 865 870 875 880
 Gln Arg Arg Leu Pro Asp Gln Phe Ser Lys Leu Ala Asp Arg Ile Gln
 885 890 895
 Leu Asn Gly Arg Tyr Tyr Leu Lys Asn Asn Met Glu Thr Glu Thr Leu
 900 905 910
 Cys Ser Asp Glu Asp Ala Gln Glu Leu Val Lys Glu Ser Gln Leu Ser
 915 920 925
 Met Leu Gln Leu Ser Thr Ile Glu Val Ala Thr Gln Leu Ser Met Arg
 930 935 940
 Asp Phe Asp Leu Phe Arg Asn Ile Glu Pro Thr Glu Tyr Ile Asp Asp
 945 950 955 960
 Leu Phe Lys Leu Asn Ser Lys Thr Gly Asn Thr His Leu Lys Arg Phe
 965 970 975
 Glu Asp Ile Val Asn Gln Glu Thr Phe Trp Val Ala Ser Glu Ile Leu
 980 985 990
 Thr Glu Ala Asn Gln Leu Lys Arg Met Lys Ile Ile Lys His Phe Ile
 995 1000 1005
 Lys Ile Ala Leu His Cys Arg Glu Cys Lys Asn Phe Asn Ser Met Phe
 1010 1015 1020
 Ala Ile Ile Ser Gly Leu Asn Leu Ala Ser Val Ala Arg Leu Arg Gly
 1025 1030 1035 1040
 Thr Trp Glu Lys Leu Pro Ser Lys Tyr Glu Lys His Leu Gln Asp Leu

1045 1050 1055
 Gln Asp Ile Phe Asp Pro Ser Arg Asn Met Ala Lys Tyr Arg Asn Ile
 1060 1065 1070
 Leu Ser Ser Gln Ser Met Gln Pro Pro Ile Ile Pro Leu Phe Pro Val
 1075 1080 1085
 Val Lys Lys Asp Met Thr Phe Leu His Glu Gly Asn Asp Ser Lys Val
 1090 1095 1100
 Asp Gly Leu Val Asn Phe Glu Lys Leu Arg Met Ile Ser Lys Glu Ile
 1105 1110 1115 1120
 Arg Gln Val Val Arg Met Thr Ser Ala Asn Met Asp Pro Ala Met Met
 1125 1130 1135
 Phe Arg Gln Arg Ser Leu Ser Gln Gly Ser Thr Asn Ser Asn Met Leu
 1140 1145 1150
 Asp Val Gln Gly Gly Ala His Lys Lys Arg Ala Arg Arg Ser Ser Leu
 1155 1160 1165
 Leu Asn Ala Lys Lys Leu Tyr Glu Asp Ala Gln Met Ala Arg Lys Val
 1170 1175 1180
 Lys Gln Tyr Leu Ser Ser Leu Asp Val Glu Thr Asp Glu Glu Lys Phe
 1185 1190 1195 1200
 Gln Met Met Ser Leu Gln Trp Glu Pro Ala Tyr Gly Thr Leu Thr Lys
 1205 1210 1215
 Asn Leu Ser Glu Lys Arg Ser Ala Lys Xaa Ser Ser Glu Met Ser Pro
 1220 1225 1230
 Val Pro Met Arg Ser Ala Gly Gln Thr Thr Lys Ala His Leu His Gln
 1235 1240 1245
 Pro His Arg Val Ser Gln Val Leu Gln Val Pro Ala Val Asn Leu His
 1250 1255 1260
 Pro Ile Arg Lys Lys Gly Gln Thr Lys Asp Pro Ala Leu Asn Thr Ser
 1265 1270 1275 1280
 Leu Pro Gln Lys Val Leu Gly Thr Thr Glu Glu Ile Ser Gly Lys Lys
 1285 1290 1295
 His Thr Glu Asp Thr Ile Ser Val Ala Ser Ser Leu His Ser Ser Pro
 1300 1305 1310
 Pro Ala Ser Pro Gln Gly Ser Pro His Lys Gly Tyr Thr Leu Ile Pro
 1315 1320 1325
 Ser Ala Lys Ser Asp Asn Leu Ser Asp Ser Ser His Ser Glu Ile Ser
 1330 1335 1340
 Ser Arg Ser Ser Ile Val Ser Asn Cys Ser Val Asp Ser Met Ser Ala
 1345 1350 1355 1360
 Ala Leu Gln Asp Glu Arg Cys Ser Ser Gln Ala Leu Ala Val Pro Glu
 1365 1370 1375
 Ser Thr Gly Ala Leu Glu Lys Thr Glu His Ala Ser Gly Ile Gly Asp
 1380 1385 1390
 His Ser Gln His Gly Pro Gly Trp Thr Leu Leu Lys Pro Ser Leu Ile
 1395 1400 1405
 Lys Cys Leu Ala Val Ser Ser Val Ser Asn Glu Glu Ile Ser Gln
 1410 1415 1420
 Glu His Ile Ile Ile Glu Ala Ala Asp Ser Gly Arg Gly Ser Trp Thr
 1425 1430 1435 1440
 Ser Cys Ser Ser Ser Ser His Asp Asn Phe Gln Ser Leu Pro Asn Pro
 1445 1450 1455
 Lys Ser Trp Asp Phe Leu Asn Ser Tyr Arg His Thr His Leu Asp Asp
 1460 1465 1470
 Pro Ile Ala Glu Val Glu Pro Thr Asp Ser Glu Pro Tyr Ser Cys Ser

1475 1480 1485
 Lys Ser Cys Ser Arg Thr Cys Gly Gln Cys Lys Gly Ser Leu Glu Arg
 1490 1495 1500
 Lys Ser Trp Thr Ser Ser Ser Ser Leu Ser Asp Thr Tyr Glu Pro Asn
 1505 1510 1515 1520
 Tyr Gly Thr Val Lys Arg Arg Val Leu Glu Ser Thr Pro Ala Glu Ser
 1525 1530 1535
 Ser Glu Gly Leu Asp Pro Lys Asp Ala Thr Asp Pro Val Tyr Lys Thr
 1540 1545 1550
 Val Thr Ser Ser Thr Glu Lys Gly Leu Ile Val Tyr Cys Val Thr Ser
 1555 1560 1565
 Pro Lys Lys Asp Asp Arg Tyr Arg Glu Pro Pro Pro Thr Pro Pro Gly
 1570 1575 1580
 Tyr Leu Gly Ile Ser Leu Ala Asp Leu Lys Glu Gly Pro His Thr His
 1585 1590 1595 1600
 Leu Lys Pro Pro Asp Tyr Ser Val Ala Val Gln Arg Ser Lys Met Met
 1605 1610 1615
 His Asn Ser Leu Ser Arg Leu Pro Pro Ala Ser Leu Ser Ser Asn Leu
 1620 1625 1630
 Glu Ala Cys Val Pro Ser Lys Ile Val Thr Gln Pro Gln Arg His Asn
 1635 1640 1645
 Leu Gln Pro Phe His Pro Lys Leu Gly Asp Val Thr Asp Ala Asp Ser
 1650 1655 1660
 Glu Ala Asp Glu Asn Glu Gln Val Ser Ala Val
 1665 1670 1675

<210> 4845

<211> 3286

<212> DNA

<213> Homo sapiens

<400> 4845

nccgcccggc gggccccggc catgcagccc cggctgcgga ggtgacactc acggacctta
 60
 gccaccgccc cgcgccatgc caccatggac gaacaggagg cattgaactc aatcatgaac
 120
 gatctggtgg ccctccagat gaaccgacgt caccggatgc ctggatatga gaccatgaag
 180
 aacaaagaca caggtcactc aaataggcag agtgacgtca gaatcaagtt cgagcacaac
 240
 ggggagaggc gaattatagc gttcagccgg cctgtgaaat atgaagatgt ggagcacaag
 300
 gtgacaacag tatttggaac acctcttgat ctacattaca tgaacaatga gctctccatc
 360
 ctgctgaaaa accaagatga tcttgataaa gcaattgaca ttttagatag aagctcaagc
 420
 atgaaaagcc ttaggatatt gctgttgtcc caggacagaa accataacag ttcctctccc
 480
 cactctgggg tgtccagaca ggtgcggatc aaggcttccc agtccgcagg ggatataaac
 540
 actatctacc agccccccga gccagaagc aggcacctct ctgtcagctc ccagaaccct
 600
 ggccgaagct caccctcccc tggttatgtt cctgagcggc agcagcacat tgcccggcag
 660

gggtcctaca ccagcatcaa cagtgagggg gagttcatcc cagagaccag cgagcagtgc
720
atgctggatc ccctgagcag tgcagaaaat tccttgtctg gaagctgccca atccttggac
780
aggtcagcag acagcccata cttccggaaa tcacgaatgt cccgtgccca gagcttccct
840
gacaacagac aggaatactc agatcgggaa actcagcttt atgacaaagg ggtcaaagg
900
ggaacctacc cccggcgcta ccacgtgtct gtgcaccaca aggactacag tgatggcaga
960
agaacatttc cccgaatacg gcgtcatcaa ggcaacttgt tcacctggt gccctccagc
1020
cgctccctga gcacaaatgg cgagaacatg ggtctggctg tgcaatacct ggacccccgt
1080
gggcgcctgc ggagtgcgga cagcgagaat gccctctctg tgcaggagag gaatgtgcc
1140
accaagtctc ccagtgtccc catcaactgg cgccggggaa agctcctggg ccaggggtgc
1200
ttcggcaggg tctatttgtg ctatgacgtg gacacgggac gtgaacttgc ttccaagcag
1260
gtccaatttg atccagacag tcctgagaca agcaaggagg tgagtgtctt ggagtgcgag
1320
atccagttgc taaagaactt gcagcatgag cgcacgtgc agtactatgg ctgtctgcgg
1380
gaccgcgtg agaagaccct gaccatcttc atggagtaca tgccaggggg ctcggtgaaa
1440
gaccagttga aggccttacg tgctctgaca gagagcgtga cccgaaagta cagcggcgag
1500
atcctggagg gcatgtccta cctgcacagc aacatgattg ttcaccggga cattaaggg
1560
gccaacatcc tccgagactc tgctgggaat gtaaagctgg gggacttttg ggccagcaaa
1620
cgctgcaga cgatctgtat gtcggggacg ggcacgtgc cgcacttg caccacctac
1680
tgatgagcc ctgaggtgat cagcggcgag ggctatggaa ggaaagcaga cgtgtggagc
1740
ctgggctgca ctgtggtgga gatgctgaca gagaaccac cgtgggcaga gtatgaagct
1800
atggccgcca tcttcaagat tgccaccag cccaccaatc ctacgtgcc ctcccacac
1860
tctgaacatg gccgggactt cctgaggcgc atttttgtgg aggctcgcca gagaccttca
1920
gctgaggagc tgctcacaca ccactttgca cagctcatgt actgagctct cagggccaca
1980
cagctgccg tgcctcttg ctgcatggca gggggctgct gctgggctca gtgaagtgc
2040
tgcttctccc aggcaaggct gtggaccatg gaggggcagc ccagccagcg tcggtctgtg
2100
cccttccgc cactggggct cagagccggg gtgggggtggc tgcagcctca ggactgggag
2160
ccccagcct gtcagatcca ggagctccag tgtcctgagc tcagcgtgga ggggtagggg
2220
ctgggaacag tgtgcaaggc agccgtgggc cccaccctcg gggatgtgtc ctgacactgc
2280

aattggcacc gaagcccaga ggggtctgggg gcacaagact gacgccaggg tatgaagagt
2340
gttattttca ttcaaagtgt tattttgttt ttccttccaa tgtctggaga ccaccagggc
2400
atctctgggc tggatgagct cccacaagcc tgagggaag gccagcactc gctagcagt
2460
gcaggcagag gcccaggctg ccgtccccta gagtcccagg ttggctctgc cagtccctgc
2520
ctttacaaa gatgaatgaa gcaaatgtca tgctgcctta ttcagggaag gaggagcctg
2580
tcctgcctgt ggccatgacc ctgcctctcc caggcagggg cccgcgatgt ggaactgctg
2640
ccactgaggg gggatccagt tttgtcaatg cagttgtctc tgttttacaa gttggagtca
2700
ctcttatgct gtaccagtt tctaaactgg agactgtgtg tgccctctgg gctctgagta
2760
cccctgcttt gggcttgggc ctaggctgca ttgaaaagag ctgaagggtg tggcctttgc
2820
gctcctggcc cagcctttgt tccccactgg agcagaaggg gagatggacg acacgggtggg
2880
ggcatctggc ctggccagtg ccctgatccc agagagcccc aggaggtgtc tcaggctgcc
2940
tgagtcgtga cctgctaggg cagagcccac tccatctggg agaagggaaa gcccatatgc
3000
taccaccagc tgtgtccaaa accgccagct ctgttcttcc tcagccagcc tcgcccattc
3060
ccttgaggte tcagcccctt tccctttag ctctcccct ggagggggaa tggcagcagg
3120
ggttggggaa acagcatctc caagcagctt agagttggcc atatttacct cagcctgggc
3180
gctggtcctt tcttcgggcc cctcccctcc aaaatgtgcc tattgctaga gtcctccct
3240
ctcaacaccc agtttccttg ggagttgtca ttaaaggaaa aaaaaa
3286

<210> 4846

<211> 626

<212> PRT

<213> Homo sapiens

<400> 4846

Met	Asp	Glu	Gln	Glu	Ala	Leu	Asn	Ser	Ile	Met	Asn	Asp	Leu	Val	Ala
1				5					10					15	
Leu	Gln	Met	Asn	Arg	Arg	His	Arg	Met	Pro	Gly	Tyr	Glu	Thr	Met	Lys
		20						25					30		
Asn	Lys	Asp	Thr	Gly	His	Ser	Asn	Arg	Gln	Ser	Asp	Val	Arg	Ile	Lys
		35					40					45			
Phe	Glu	His	Asn	Gly	Glu	Arg	Arg	Ile	Ile	Ala	Phe	Ser	Arg	Pro	Val
	50					55					60				
Lys	Tyr	Glu	Asp	Val	Glu	His	Lys	Val	Thr	Thr	Val	Phe	Gly	Gln	Pro
65					70				75					80	
Leu	Asp	Leu	His	Tyr	Met	Asn	Asn	Glu	Leu	Ser	Ile	Leu	Leu	Lys	Asn
			85					90						95	
Gln	Asp	Asp	Leu	Asp	Lys	Ala	Ile	Asp	Ile	Leu	Asp	Arg	Ser	Ser	Ser

			100						105						110					
Met	Lys	Ser	Leu	Arg	Ile	Leu	Leu	Leu	Ser	Gln	Asp	Arg	Asn	His	Asn					
		115					120					125								
Ser	Ser	Ser	Pro	His	Ser	Gly	Val	Ser	Arg	Gln	Val	Arg	Ile	Lys	Ala					
		130				135					140									
Ser	Gln	Ser	Ala	Gly	Asp	Ile	Asn	Thr	Ile	Tyr	Gln	Pro	Pro	Glu	Pro					
145					150					155					160					
Arg	Ser	Arg	His	Leu	Ser	Val	Ser	Ser	Gln	Asn	Pro	Gly	Arg	Ser	Ser					
			165						170					175						
Pro	Pro	Pro	Gly	Tyr	Val	Pro	Glu	Arg	Gln	Gln	His	Ile	Ala	Arg	Gln					
			180					185					190							
Gly	Ser	Tyr	Thr	Ser	Ile	Asn	Ser	Glu	Gly	Glu	Phe	Ile	Pro	Glu	Thr					
		195					200					205								
Ser	Glu	Gln	Cys	Met	Leu	Asp	Pro	Leu	Ser	Ser	Ala	Glu	Asn	Ser	Leu					
		210				215					220									
Ser	Gly	Ser	Cys	Gln	Ser	Leu	Asp	Arg	Ser	Ala	Asp	Ser	Pro	Ser	Phe					
225					230					235					240					
Arg	Lys	Ser	Arg	Met	Ser	Arg	Ala	Gln	Ser	Phe	Pro	Asp	Asn	Arg	Gln					
			245						250					255						
Glu	Tyr	Ser	Asp	Arg	Glu	Thr	Gln	Leu	Tyr	Asp	Lys	Gly	Val	Lys	Gly					
			260					265					270							
Gly	Thr	Tyr	Pro	Arg	Arg	Tyr	His	Val	Ser	Val	His	His	Lys	Asp	Tyr					
		275					280					285								
Ser	Asp	Gly	Arg	Arg	Thr	Phe	Pro	Arg	Ile	Arg	Arg	His	Gln	Gly	Asn					
		290				295					300									
Leu	Phe	Thr	Leu	Val	Pro	Ser	Ser	Arg	Ser	Leu	Ser	Thr	Asn	Gly	Glu					
305					310					315					320					
Asn	Met	Gly	Leu	Ala	Val	Gln	Tyr	Leu	Asp	Pro	Arg	Gly	Arg	Leu	Arg					
			325						330					335						
Ser	Ala	Asp	Ser	Glu	Asn	Ala	Leu	Ser	Val	Gln	Glu	Arg	Asn	Val	Pro					
			340					345					350							
Thr	Lys	Ser	Pro	Ser	Ala	Pro	Ile	Asn	Trp	Arg	Arg	Gly	Lys	Leu	Leu					
		355					360					365								
Gly	Gln	Gly	Ala	Phe	Gly	Arg	Val	Tyr	Leu	Cys	Tyr	Asp	Val	Asp	Thr					
					375							380								
Gly	Arg	Glu	Leu	Ala	Ser	Lys	Gln	Val	Gln	Phe	Asp	Pro	Asp	Ser	Pro					
385					390					395					400					
Glu	Thr	Ser	Lys	Glu	Val	Ser	Ala	Leu	Glu	Cys	Glu	Ile	Gln	Leu	Leu					
			405						410					415						
Lys	Asn	Leu	Gln	His	Glu	Arg	Ile	Val	Gln	Tyr	Tyr	Gly	Cys	Leu	Arg					
			420					425					430							
Asp	Arg	Ala	Glu	Lys	Thr	Leu	Thr	Ile	Phe	Met	Glu	Tyr	Met	Pro	Gly					
		435					440					445								
Gly	Ser</																			

530		535		540
Gly Arg Lys Ala Asp Val Trp Ser Leu Gly Cys Thr Val Val Glu Met				
545		550		555
Leu Thr Glu Lys Pro Pro Trp Ala Glu Tyr Glu Ala Met Ala Ala Ile				
	565		570	
Phe Lys Ile Ala Thr Gln Pro Thr Asn Pro Gln Leu Pro Ser His Ile				
	580		585	
Ser Glu His Gly Arg Asp Phe Leu Arg Arg Ile Phe Val Glu Ala Arg				
	595		600	
Gln Arg Pro Ser Ala Glu Glu Leu Leu Thr His His Phe Ala Gln Leu				
	610		615	
Met Tyr			620	
625				

<210> 4847

<211> 2804

<212> DNA

<213> Homo sapiens

<400> 4847

```

ccaacagcag cggagaaaacg tttctctttc ctctcagttt gcgcacacca tggcggcccc
60
tgcccagcag actactcagc ctggcgcgcg gaagcgcaaa ggcaaggctc agtatgtgct
120
ggccaagcgc gctcggcgct gcgacgctgg cgggccccgt cagctagagc ccgggctaca
180
gggcatcctc atcacctgca atatgaacga gcgcaagtgc gtggaggagg cctacagcct
240
cctcaacgaa tacggcgacg acatgtatgg gccagaaaag ttttatgcaa acagtttaca
300
gacaaggatc agcagccctc tggaagtgag ggagaggatg atgatgcgga ggctgccttg
360
aagaaagaag ttggtgacat taaggcatct acagagatga ggtaagaag attccagtca
420
gtggaaagtg gagcaaataa cgttgtcttc atcaggacac ttgggataga gcctgagaaa
480
ttggtgcata atattctcca ggatatgtac aaaaccaaga aaaagaagac tcgagttatt
540
ttgcgaatgt taccatctc aggcacatgc aaggcttttt tagaagatat gaaaaaatat
600
gcagaaacat ttttgaacc ctggttttaa gtcctaaaca aaggacatt tcagattgtg
660
tacaaatctc gaaataacag tcatgtgaat agagaagaag ttatcagaga attggcagga
720
atagtgtgca ccctcaattc agaaaaataa gtggatctca ccaatccaca gtacacagt
780
gtagttagaa tcatcaaagc tgtctgttgc ctgagtgttg tgaaagatta catgttgttt
840
agaaaataca atctccagga ggtggtgaag agccctaagg atccgtcaca gcttaactca
900
aagcagggaa atgggaaaga agctaaactg gaatctgcgg acaaatcaga ccaaaacaac
960
acagcagaag gaaaaataa ccagcaggta ccagagaata ctgaggagct agggcagaca
1020

```

aaaccaacgt ctaatccaca ggtggtaaat gagggaggag ccaaacctga acttgcaagt
1080
caagccacag aaggatccaa gtcaaatgaa aatgacttct cataggaagt catttgggtg
1140
tggagctgac agtccagtgt cgcaattttg gaaggcaaga tgtgagagag acgagaacca
1200
ttttaggcat agaactacag acatttctga aaaggttggt gatgaagaac ttcagtcttc
1260
tgagtatact tcagtatact agtgcaacaa gggacacaaa gaaattctgt cttaataaag
1320
aaagctactt ctcaagggtta ttatgtggac tcagtccaag ctctcctgtc ccattgtgca
1380
ttgtctgtga catgcaactt acaaaaactag caattgtaac aataaatcac agccacttga
1440
caagaaagga tattcattat tttcaaatgg cttttggact atcaaaaaca gtaaggcttt
1500
tgttcagaaa tcacctttag tcaaaagggt taagaagcaa attatttagt agcagaactt
1560
atctcaggaa aggaaaatat gcatggttgg tgagaatcta ataacattaa aatgctgggg
1620
caagatgcag tacaaagttg aagagacttt attctcaata agttgattta ctgatgatat
1680
gtcatatgat gcaaaaaagg ttttgtgtca ttaactgaaa agtagcagct tctctatcca
1740
ggatgatgag tcaacagggt tcaactaatat ttgtcatgct gtagcatttg taagatttgt
1800
aatgatgaa attcaaagaa aactttttct attgctagga gcctgccaga acaaaggcca
1860
atatataatg ttgtgacatc atatctgata accagaggtc tggatatctac actcctggtg
1920
cccatcagt ggttgtctcc ataagtcatt ttgcgttatt aaaaaaaaaa aaagaaatcc
1980
tgatgttgac attatagcac actgctttct ccacagagat gctgatatca aaaacttgaa
2040
gatacagtga agttctgaat aatgttacaa aactggttac ctgtatcaaa gaccatttta
2100
tgcaaaaatg ttaaaaaaaaaa aaaacaccca aaacaaaaac ctggacagac agcacataaa
2160
cctcctgccc catacaaaaca tccaggggct tctcaaagga agcgttctct acaggatatt
2220
tgaattgaaa ggtgaattgc cagagtactt acaataaaac agccagcttt tgctgagtgc
2280
tttgaaaatg aaaaatgact acagaaagta gcctattttg cagacgtttt tcatcacatg
2340
aacaatatga caagtctctg aaaggttctg gggaaaaaaa tttttcttaa agcgacaaga
2400
ctcttagatc taaaaggaaa ctgacttgcc accttgccag aggaattctt gaaatgtttc
2460
tgcagccact tggccttgaa aataaagggt gcaactctca agtcttggtc taaccggct
2520
ggaggaacca caagacccaa tgaaatagca ttttctctcc ttttccagc actagtatat
2580
aacctatgag gaacccttgt ctctgaatct gctcagcttg aaattttgtc tctgaaggaa
2640

gagaatgaac tcagccctag tctgacagtc ctagatttct gtgaaataag agtattcttc
 2700
 aacttagtgc tcacactcac ataccatgag gggtctctgc aggggttttag gggtttctcg
 2760
 aattttaaag ttttttcaag gcctcttttt gggtaaaaca attg
 2804

<210> 4848
 <211> 242
 <212> PRT
 <213> Homo sapiens

<400> 4848
 Met Arg Leu Arg Arg Phe Gln Ser Val Glu Ser Gly Ala Asn Asn Val
 1 5 10 15
 Val Phe Ile Arg Thr Leu Gly Ile Glu Pro Glu Lys Leu Val His His
 20 25 30
 Ile Leu Gln Asp Met Tyr Lys Thr Lys Lys Lys Thr Arg Val Ile
 35 40 45
 Leu Arg Met Leu Pro Ile Ser Gly Thr Cys Lys Ala Phe Leu Glu Asp
 50 55 60
 Met Lys Lys Tyr Ala Glu Thr Phe Leu Glu Pro Trp Phe Lys Ala Pro
 65 70 75 80
 Asn Lys Gly Thr Phe Gln Ile Val Tyr Lys Ser Arg Asn Asn Ser His
 85 90 95
 Val Asn Arg Glu Glu Val Ile Arg Glu Leu Ala Gly Ile Val Cys Thr
 100 105 110
 Leu Asn Ser Glu Asn Lys Val Asp Leu Thr Asn Pro Gln Tyr Thr Val
 115 120 125
 Val Val Glu Ile Ile Lys Ala Val Cys Cys Leu Ser Val Val Lys Asp
 130 135 140
 Tyr Met Leu Phe Arg Lys Tyr Asn Leu Gln Glu Val Val Lys Ser Pro
 145 150 155 160
 Lys Asp Pro Ser Gln Leu Asn Ser Lys Gln Gly Asn Gly Lys Glu Ala
 165 170 175
 Lys Leu Glu Ser Ala Asp Lys Ser Asp Gln Asn Asn Thr Ala Glu Gly
 180 185 190
 Lys Asn Asn Gln Gln Val Pro Glu Asn Thr Glu Glu Leu Gly Gln Thr
 195 200 205
 Lys Pro Thr Ser Asn Pro Gln Val Val Asn Glu Gly Gly Ala Lys Pro
 210 215 220
 Glu Leu Ala Ser Gln Ala Thr Glu Gly Ser Lys Ser Asn Glu Asn Asp
 225 230 235 240
 Phe Ser

<210> 4849
 <211> 321
 <212> DNA
 <213> Homo sapiens

<400> 4849
 nccatgtgtg gaggcagaga ggcagcatcc aggcgctggt cctctcggga catgctgctg
 60

ctgaagaaac acacggagga catcagcagc gtctacgaga tccgcgagag gctcgggctcg
 120
 ggtgccttct ccgaggtggt gctggcccag gagcggggct ccgcacacct cgtggccctc
 180
 aagtgcattcc ccaagaaggc cctccggggc aaggaggccc tggaggagaa cgagatcgca
 240
 gtgctccgta ggatcagtca cccaacatc gtcgctctgg aggatgtcca cgagagccct
 300
 tcccacctct acctggccat g
 321

<210> 4850

<211> 90

<212> PRT

<213> Homo sapiens

<400> 4850

Met	Leu	Leu	Leu	Lys	Lys	His	Thr	Glu	Asp	Ile	Ser	Ser	Val	Tyr	Glu
1				5				10					15		
Ile	Arg	Glu	Arg	Leu	Gly	Ser	Gly	Ala	Phe	Ser	Glu	Val	Val	Leu	Ala
			20					25					30		
Gln	Glu	Arg	Gly	Ser	Ala	His	Leu	Val	Ala	Leu	Lys	Cys	Ile	Pro	Lys
		35					40					45			
Lys	Ala	Leu	Arg	Gly	Lys	Glu	Ala	Leu	Val	Glu	Asn	Glu	Ile	Ala	Val
		50				55					60				
Leu	Arg	Arg	Ile	Ser	His	Pro	Asn	Ile	Val	Ala	Leu	Glu	Asp	Val	His
65					70					75				80	
Glu	Ser	Pro	Ser	His	Leu	Tyr	Leu	Ala	Met						
				85					90						

<210> 4851

<211> 820

<212> DNA

<213> Homo sapiens

<400> 4851

aagatctgag cgagtcgctg agctgagccc ggcaggggct ggggtggtgc tgctgctatg
 60
 agttgcacca tcgagaagat cctgacagac gccaaagacgc tgctggagag gctacgggag
 120
 cacgatgcgg ccgccgagtc gctggtggat cagtcggcgg cgctgcaccg gcgggtagca
 180
 gctatgcggg aggcggggac agcgcttccg gaccagtatc aagaggatgc atccgatatg
 240
 aaggacatgt ccaaatacaa acctcacatt ctgctgtccc aagagaacac acagattaga
 300
 gacttgcaac aggaaaacag agagctatgg atttccttgg aggaacacca ggatgctttg
 360
 gaacttatca tgagcaata tcggaaacag atgttacagt taatggttgc taaaaaagcg
 420
 gtggatgctg aaccagtccg gaaagtcac cagtctcact ctgcagaaat tgagagtcag
 480
 attgacagaa tctgtgaaat gggagaagtg atgaggaaag cagttcaggt ggatgatgac
 540

cagtttttgta agattcagga aaaattagcc caattagagc ttgaaaataa ggaacttcga
 600
 gaattattgt ccatcagcag tgagtctctt caagccagaa aggaaaactc aatggacact
 660
 gcttcccaag ccatcaaata actgaactct gaatgatggc tggagattgt ctatcaagga
 720
 aggaagttac tgtcttccca ttcaagtact gtccattaag tgtcttgctt cagatttgat
 780
 ttaatcttaa ttaaaggat caggtggcaa tttagaattc
 820

<210> 4852

<211> 207

<212> PRT

<213> Homo sapiens

<400> 4852

Met	Ser	Cys	Thr	Ile	Glu	Lys	Ile	Leu	Thr	Asp	Ala	Lys	Thr	Leu	Leu
1				5				10						15	
Glu	Arg	Leu	Arg	Glu	His	Asp	Ala	Ala	Ala	Glu	Ser	Leu	Val	Asp	Gln
			20				25						30		
Ser	Ala	Ala	Leu	His	Arg	Arg	Val	Ala	Ala	Met	Arg	Glu	Ala	Gly	Thr
	35					40					45				
Ala	Leu	Pro	Asp	Gln	Tyr	Gln	Glu	Asp	Ala	Ser	Asp	Met	Lys	Asp	Met
	50					55					60				
Ser	Lys	Tyr	Lys	Pro	His	Ile	Leu	Leu	Ser	Gln	Glu	Asn	Thr	Gln	Ile
65					70					75				80	
Arg	Asp	Leu	Gln	Gln	Glu	Asn	Arg	Glu	Leu	Trp	Ile	Ser	Leu	Glu	Glu
			85					90						95	
His	Gln	Asp	Ala	Leu	Glu	Leu	Ile	Met	Ser	Lys	Tyr	Arg	Lys	Gln	Met
			100					105					110		
Leu	Gln	Leu	Met	Val	Ala	Lys	Lys	Ala	Val	Asp	Ala	Glu	Pro	Val	Leu
	115						120					125			
Lys	Ala	His	Gln	Ser	His	Ser	Ala	Glu	Ile	Glu	Ser	Gln	Ile	Asp	Arg
	130					135					140				
Ile	Cys	Glu	Met	Gly	Glu	Val	Met	Arg	Lys	Ala	Val	Gln	Val	Asp	Asp
145					150					155				160	
Asp	Gln	Phe	Cys	Lys	Ile	Gln	Glu	Lys	Leu	Ala	Gln	Leu	Glu	Leu	Glu
			165					170						175	
Asn	Lys	Glu	Leu	Arg	Glu	Leu	Leu	Ser	Ile	Ser	Ser	Glu	Ser	Leu	Gln
		180						185				190			
Ala	Arg	Lys	Glu	Asn	Ser	Met	Asp	Thr	Ala	Ser	Gln	Ala	Ile	Lys	
	195						200					205			

<210> 4853

<211> 1467

<212> DNA

<213> Homo sapiens

<400> 4853

ntgtgaggtc gcgttcccca gtgttacgga gggctccttga ggcaggagtg aaaattgggt
 60
 ctggggggtta gtcctgggggt ggaggtcttg gcacgcggg tcggaccccc tccatcttcg
 120

gttttgcaca ccccgctttc cagcgcgagg tcgggcgggg gtagggcggc gtcgctgctg
180
tgacgtcatc cagcgggcgcc atcggaggct ccagtggcct tgacctcccg cgtcgtgtag
240
gcctgcgcgg cgatgctgca gtctgtccgg gccggggcgc gggcctggct tcggcctacc
300
ggcagccagg gcctgagttc cctggcgga aaggcagcgc gtgcgaccga gaacccggag
360
caggtggcga gcgagggtct cccggagccc gtgctgcga aagtcgagct cccggtaccc
420
actcatcgac gccagtgca ggctgggtc gagtccctgc ggggcttcga gcaggagcgc
480
gtgggcctgg ccgacctgca cccgatgtt ttgccaccg cgcccaggct ggacatactg
540
caccagggtt ctatgtggca gaagaacttc aagagaatta gctatgcaa gaccaagacg
600
agagccgagg tgcggggcgg tggccggaag cctntggccg cagaaaggca ctgggcgggc
660
ccggcatggc agcatccgct ctccgctctg gcgaggagga ggtgttgccc atggcccccg
720
ggccccacaa gttactacta catgctgccc atgaaggctg gggcgctggg tctcaaagtg
780
gcactgaccg tcaagctggc ccaggacgac ctgcacatca tggactccct agagctgccc
840
accggagacc cacagtacct gacagagctg gcgactacc gccgctgggg ggactccgta
900
ctcctcgtgg acttaacaca cgaggagatg ccacagagca tcgtggaggc cacctctagg
960
cttaagacct tcaacttgat cccggctgtt ggccctaaatg tgcacagcat gctcaagcac
1020
cagacgtgg tctgacgct gccaccgct gccttcctgg aggacaagct gctctggcag
1080
gactcacgtt acagaccct ctacccttc agcctgccct acagcgactt ccccgaccc
1140
ctacccacg ctaccaggg ccagcgggc acccgtacc actgttgatg tgaagcacct
1200
cttctgagcc aggcgagcc cctggccgac ttgggagcct tagggccacg cccaccctc
1260
gaggaagggtg tcacctggac cccttcattc cacggaggaa gctgaggcca cagggagcgg
1320
ccatcgccat tgggaagggg cgactccacg gagagcccag acggggcttc tgcattcatt
1380
ccctcttttt gtttttaaaa taaattgtat ttttgaatca aaaaaaaaaa aaaaaaaaaa
1440
aaaaaaaaa aaaaaaaaaa aaaaaa
1467

<210> 4854

<211> 311

<212> PRT

<213> Homo sapiens

<400> 4854

Met Leu Gln Phe Val Arg Ala Gly Ala Arg Ala Trp Leu Arg Pro Thr

1 5 10 15
 Gly Ser Gln Gly Leu Ser Ser Leu Ala Glu Glu Ala Ala Arg Ala Thr
 20 25 30
 Glu Asn Pro Glu Gln Val Ala Ser Glu Gly Leu Pro Glu Pro Val Leu
 35 40 45
 Arg Lys Val Glu Leu Pro Val Pro Thr His Arg Arg Pro Val Gln Ala
 50 55 60
 Trp Val Glu Ser Leu Arg Gly Phe Glu Gln Glu Arg Val Gly Leu Ala
 65 70 75 80
 Asp Leu His Pro Asp Val Phe Ala Thr Ala Pro Arg Leu Asp Ile Leu
 85 90 95
 His Gln Val Ala Met Trp Gln Lys Asn Phe Lys Arg Ile Ser Tyr Ala
 100 105 110
 Lys Thr Lys Thr Arg Ala Glu Val Arg Gly Gly Gly Arg Lys Pro Xaa
 115 120 125
 Ala Ala Glu Arg His Trp Ala Gly Pro Ala Trp Gln His Pro Leu Ser
 130 135 140
 Ala Leu Ala Arg Arg Arg Cys Cys Pro Trp Pro Pro Gly Pro Thr Ser
 145 150 155 160
 Tyr Tyr Tyr Met Leu Pro Met Lys Val Arg Ala Leu Gly Leu Lys Val
 165 170 175
 Ala Leu Thr Val Lys Leu Ala Gln Asp Asp Leu His Ile Met Asp Ser
 180 185 190
 Leu Glu Leu Pro Thr Gly Asp Pro Gln Tyr Leu Thr Glu Leu Ala His
 195 200 205
 Tyr Arg Arg Trp Gly Asp Ser Val Leu Leu Val Asp Leu Thr His Glu
 210 215 220
 Glu Met Pro Gln Ser Ile Val Glu Ala Thr Ser Arg Leu Lys Thr Phe
 225 230 235 240
 Asn Leu Ile Pro Ala Val Gly Leu Asn Val His Ser Met Leu Lys His
 245 250 255
 Gln Thr Leu Val Leu Thr Leu Pro Thr Val Ala Phe Leu Glu Asp Lys
 260 265 270
 Leu Leu Trp Gln Asp Ser Arg Tyr Arg Pro Leu Tyr Pro Phe Ser Leu
 275 280 285
 Pro Tyr Ser Asp Phe Pro Arg Pro Leu Pro His Ala Thr Gln Gly Pro
 290 295 300
 Ala Ala Thr Pro Tyr His Cys
 305 310

<210> 4855

<211> 750

<212> DNA

<213> Homo sapiens

<400> 4855

nncgcaggag taacctactt ggtctcctgc tttcgcgaca tggccttcaa ttttggggct

60

ccctcgggca cctccggtac cgctgcagcc accgcggccc ccgcgggtgg gtttggagga

120

tttgggacaa catctacaac tgcaggttct gcattcagct tttctgcccc aactaacaca

180

ggcactactg gactctttgg tggctactcag aacaaagggt ttggatttgg tactggtttt

240

ggcacaacaa cgggaactag tactgggttta ggtactgggtt tgggaactgg actgggattt
 300
 ggaggattta atacacagca gcagcagcag caaactacat taggtggtct cttcagtcag
 360
 cctacacaag ctcctaccca gtccaaccag ctgataaata ctgcgagtgc tctttctgct
 420
 ccaacgctgt tgggagatga gagagatgct attttggcaa aatggaatca actgcaggcc
 480
 ttttggggaa caggaaaagg gtatttcaac aataatattc cgccagtga attcacacaa
 540
 gaaaatccct tttgccgatt taaggcagta ggttatagtt gcatgccag taataaagat
 600
 gaagacgggc tagtgggtttt agttttcaac aaaaaagaaa cagagattcg aagccaacaa
 660
 caacagttgg tagaatcatt gcataaagtt ttgggaggaa accagaccct tactgtaa
 720
 gtagagggca ctaaaacatt gccagatgat
 750

<210> 4856

<211> 237

<212> PRT

<213> Homo sapiens

<400> 4856

Met	Ala	Phe	Asn	Phe	Gly	Ala	Pro	Ser	Gly	Thr	Ser	Gly	Thr	Ala	Ala	1	5	10	15
Ala	Thr	Ala	Ala	Pro	Ala	Gly	Gly	Phe	Gly	Gly	Phe	Gly	Thr	Thr	Ser	20	25	30	
Thr	Thr	Ala	Gly	Ser	Ala	Phe	Ser	Phe	Ser	Ala	Pro	Thr	Asn	Thr	Gly	35	40	45	
Thr	Thr	Gly	Leu	Phe	Gly	Gly	Thr	Gln	Asn	Lys	Gly	Phe	Gly	Phe	Gly	50	55	60	
Thr	Gly	Phe	Gly	Thr	Thr	Thr	Gly	Thr	Ser	Thr	Gly	Leu	Gly	Thr	Gly	65	70	75	80
Leu	Gly	Thr	Gly	Leu	Gly	Phe	Gly	Gly	Phe	Asn	Thr	Gln	Gln	Gln	Gln	85	90	95	
Gln	Gln	Thr	Thr	Leu	Gly	Gly	Leu	Phe	Ser	Gln	Pro	Thr	Gln	Ala	Pro	100	105	110	
Thr	Gln	Ser	Asn	Gln	Leu	Ile	Asn	Thr	Ala	Ser	Ala	Leu	Ser	Ala	Pro	115	120	125	
Thr	Leu	Leu	Gly	Asp	Glu	Arg	Asp	Ala	Ile	Leu	Ala	Lys	Trp	Asn	Gln	130	135	140	
Leu	Gln	Ala	Phe	Trp	Gly	Thr	Gly	Lys	Gly	Tyr	Phe	Asn	Asn	Asn	Ile	145	150	155	160
Pro	Pro	Val	Glu	Phe	Thr	Gln	Glu	Asn	Pro	Phe	Cys	Arg	Phe	Lys	Ala	165	170	175	
Val	Gly	Tyr	Ser	Cys	Met	Pro	Ser	Asn	Lys	Asp	Glu	Asp	Gly	Leu	Val	180	185	190	
Val	Leu	Val	Phe	Asn	Lys	Lys	Glu	Thr	Glu	Ile	Arg	Ser	Gln	Gln	Gln	195	200	205	
Gln	Leu	Val	Glu	Ser	Leu	His	Lys	Val	Leu	Gly	Gly	Asn	Gln	Thr	Leu	210	215	220	
Thr	Val	Asn	Val	Glu	Gly	Thr	Lys	Thr	Leu	Pro	Asp	Asp							

225

230

235

<210> 4857

<211> 2887

<212> DNA

<213> Homo sapiens

<400> 4857

nncggccggc gagggcagat ggaagagtat gaggaagagc cctctcgggg gtggtggcgg
60
ctcgggagct ccagtcaggc cgcctgcctc aaacagatcc ttctgctgca attggacctc
120
atcgaacagc agcagcagca gctgcaggcc aaggaaaagg agatcgagga gctgaagtca
180
gagagagaca cgctccttgc tcggattgaa cgtatggaaa ggcggatgca gctggtaaag
240
aaggataacg agaaagaaag gcacaagctg ttccagggtc atgaaactga agagagagag
300
gaaacagagc tatctgagaa aattaaactg gagtgccagc cggagctttc cgagacatcc
360
cagactctgc ctccaagcc cttctcatgt gggcggagtg gaaagggaca taaaaggaaa
420
tccccatttg gaagtacaga aagaaagact cctgttaaaa agctggctcc tgaattttca
480
aaagtcaaaa caaaaactcc taagcactct cctattaaag aggaaccctg tggttcctta
540
tctgaaactg tttgtaaacy tgaattgagg agccaagaaa cccagaaaa gccccggtct
600
tcagtggaca cccaccaag actctccact ccccaaaagg gaccagcac ccatcccaag
660
gagaaagcct tctcaagtga gatagaagat ttgccgtacc tttccaccac agaaatgtat
720
ttgtgtcgtt ggcaccagcc tccccatca cggttaccat tacgggaatc ctctccaaag
780
aaggaggaga ctgtagcaag taaggcatag agaacacttg ctcttatacc ctagtgggtg
840
cgggtcaagct aacaagtgtg aaaatgcctt tggcattttt aaaaaagtgc aatcaataaa
900
gcagagttct gtcaagaatg agtaagttaa cagccagaga cagacactgt gcaggcattg
960
caaatagatg gaattacagc aaaatgtgct caatgtattt gcctgcttac aacactggga
1020
gatgtgtttg ccagtaagtt gctcatcaca agagcaccag acttgggggt gtaatctccg
1080
gcaacttgca tgccctctga aagaagggtt ttctgtgctg tgaaatgcat agaactatac
1140
tttgccatgc acgactgttc ctgcaattga tattgtgtga aatctgggag ggtgggtctt
1200
gggtgttctc aggggccaat ggtaattttt ggggtgggga gccagcttgg ggtggggaat
1260
tttcacctgg gcctccgctc tttaactata taaacattta tctgtatata tatgtccctg
1320
tctggggggc aggaggaatc tgccaaagac caacagtctt actttatctt actatacttc
1380

acaaaggttc taaaatgtga agagtttgtt tgaaaaatag tttgtagacc attttattta
1440
aatatatgaa caaccaatgg gctactgcaa tccaagtaaa ctcttcacat tttagaacct
1500
ttgtgaagta tagtaagata aagtaagact gttggctctt ggcagattcc tcctgcccc
1560
cagacaggga catagatata cagataaatg tttatatagt taaagagcgg aggccagggt
1620
gaaaattccc caccccaagc tggctcccca acccaaaaat taccattggc ccctgagaac
1680
acccaaagac caccctccca gatttcacac aatatcaatt gcaggaacag tcgtgcatgg
1740
caaagtatag ttctatgcat ttcacagcac agaaaaccct tctttcagag ggcattgcaag
1800
ttgccggaga ttacaccccc aagtctgggt ctcttgtgat gagcaactta ctggcaaaca
1860
catctcccag tgttgtaagc aggcaaatac attgagcaca ttttgtgta attccatcta
1920
tttgaatgc ctgcacagtg tctgtctctg gctgttaact tactcattct tgacagaact
1980
ctgctttatt gattgcactt ttttaaaaat gccaaaggca ttttcacact tgtagcttg
2040
accgccacca ctagggtata agagcaagtg ttctctatgc cttacttgct acagtctct
2100
ccttctttgg agaggattcc cgtaatggta acggtgatgg gggaggctgg tgccaacgac
2160
acaaatacat ttctgtgggt gaaaggtagc gcaaatcttc tatctcactt gagaaggctt
2220
tctccttggg atgggtgctg ggtccctttt ggggagtga gagtcttggg ggggtgtcca
2280
ctgaagaccg gggcttttct ggggtttctt ggctcctcaa ttacgttta caaacagttt
2340
cagataagga accacagggt tcctctttaa taggagagtg cttaggagtt tttgtttga
2400
cttttgaaaa ttcaggagcc agctttttaa caggagtctt tctttctgta cttccaaatg
2460
ggggtagaag tctaaccctt ccacccctc tcctcccag cagtcccacg cgggtatggg
2520
agagaatgaa gttctttgtc tctaagggtat tcaaaccaga aacggaggga cctctggttc
2580
ccagagggag gaaaatccat gatgtctgct gccagggag ctattgccac cgcctccttg
2640
ggatgaagta ttgccagcta ccaacagttc cttcccaacg gccatcttcc agccttctta
2700
aacgactcct agcatcttcg ggaggctcct gaaggactga agcaaaggaa atctctgaag
2760
ggatttagtc cttgaaaggg agtagggata cttagggtgt tctgtgttga gcgcttcttc
2820
ctatctctcc agcttcatgt atgtgtgtct ttatgtcaa gcaattgagc caacaagtcc
2880
tcagaat
2887

<210> 4858

<211> 269
 <212> PRT
 <213> Homo sapiens

<400> 4858
 Xaa Gly Arg Arg Gly Gln Met Glu Glu Tyr Glu Glu Glu Pro Ser Arg
 1 5 10 15
 Gly Trp Trp Arg Leu Gly Ser Ser Ser Gln Ala Ala Cys Leu Lys Gln
 20 25 30
 Ile Leu Leu Leu Gln Leu Asp Leu Ile Glu Gln Gln Gln Gln Leu
 35 40 45
 Gln Ala Lys Glu Lys Glu Ile Glu Glu Leu Lys Ser Glu Arg Asp Thr
 50 55 60
 Leu Leu Ala Arg Ile Glu Arg Met Glu Arg Arg Met Gln Leu Val Lys
 65 70 75 80
 Lys Asp Asn Glu Lys Glu Arg His Lys Leu Phe Gln Gly Tyr Glu Thr
 85 90 95
 Glu Glu Arg Glu Glu Thr Glu Leu Ser Glu Lys Ile Lys Leu Glu Cys
 100 105 110
 Gln Pro Glu Leu Ser Glu Thr Ser Gln Thr Leu Pro Pro Lys Pro Phe
 115 120 125
 Ser Cys Gly Arg Ser Gly Lys Gly His Lys Arg Lys Ser Pro Phe Gly
 130 135 140
 Ser Thr Glu Arg Lys Thr Pro Val Lys Lys Leu Ala Pro Glu Phe Ser
 145 150 155 160
 Lys Val Lys Thr Lys Thr Pro Lys His Ser Pro Ile Lys Glu Glu Pro
 165 170 175
 Cys Gly Ser Leu Ser Glu Thr Val Cys Lys Arg Glu Leu Arg Ser Gln
 180 185 190
 Glu Thr Pro Glu Lys Pro Arg Ser Ser Val Asp Thr Pro Pro Arg Leu
 195 200 205
 Ser Thr Pro Gln Lys Gly Pro Ser Thr His Pro Lys Glu Lys Ala Phe
 210 215 220
 Ser Ser Glu Ile Glu Asp Leu Pro Tyr Leu Ser Thr Thr Glu Met Tyr
 225 230 235 240
 Leu Cys Arg Trp His Gln Pro Pro Pro Ser Pro Leu Pro Leu Arg Glu
 245 250 255
 Ser Ser Pro Lys Lys Glu Glu Thr Val Ala Ser Lys Ala
 260 265

<210> 4859
 <211> 689
 <212> DNA
 <213> Homo sapiens

<400> 4859
 cctgctgagg acatgaggac ccgtcttttt gcagtgccag gcagggtggc caaagaggac
 60
 tggactctgg acctggagcc ccgtgggtcca gttcacattc accccacaag agtttcagga
 120
 ggcctccac ggtgctgtg ctgggtggcg gtggtggtgc caagaggaat ggaatgtcct
 180
 gggctccttc aggagctctc taccagggg caaggagagc ccagagagaa gcgcctggt
 240

ctcttgagct tctgatctg ctctgtccc ccgtctcct ccactccctt gcctttccct
 300
 aggttggtccc ctccctgggc ttttgtgtgt tttgggagat gtcacctaac caggacattg
 360
 atattcaatc ccatccccct tctcccacc ctgcccact ttgatttaat cctttggctg
 420
 tgggctgagg cctcccaggg aagttgggtg ggggtgggtg tgagaccccc tcagaccagc
 480
 acagagacct gtccttgtgc agtctgcacc ctgcactccc tcccttgcct gtagatgttc
 540
 tggatgacag tagaggaaat ggacaaggtc agtttgaata tcccagaaca cagtgtctg
 600
 tctctccca ccagtccagt tagcttccct tctggaccaa tagacgaggg gagacccat
 660
 ggatcctctg gctgggaagc acctgacca
 689

<210> 4860

<211> 173

<212> PRT

<213> Homo sapiens

<400> 4860

Met	Arg	Thr	Arg	Leu	Phe	Ala	Val	Pro	Gly	Arg	Val	Ala	Lys	Glu	Asp
1				5				10					15		
Trp	Thr	Leu	Asp	Leu	Glu	Pro	Arg	Gly	Pro	Val	His	Ile	His	Pro	Thr
		20						25				30			
Arg	Val	Ser	Gly	Gly	Leu	Pro	Arg	Cys	Leu	Cys	Trp	Val	Ala	Val	Val
		35						40				45			
Val	Pro	Arg	Gly	Met	Glu	Cys	Pro	Gly	Leu	Leu	Gln	Glu	Leu	Ser	Thr
	50					55				60					
Gln	Gly	Gln	Gly	Glu	Pro	Arg	Glu	Lys	Arg	Pro	Gly	Leu	Leu	Ser	Phe
65				70				75						80	
Leu	Ile	Cys	Ser	Cys	Pro	Pro	Leu	Ser	Ser	Thr	Pro	Leu	Pro	Phe	Pro
			85					90						95	
Arg	Leu	Ser	Pro	Pro	Trp	Ala	Phe	Val	Cys	Phe	Gly	Arg	Cys	His	Leu
		100						105					110		
Thr	Arg	Thr	Leu	Ile	Phe	Asn	Pro	Ile	Pro	Leu	Pro	Pro	Thr	Leu	Pro
		115					120						125		
His	Phe	Asp	Leu	Ile	Leu	Trp	Leu	Trp	Ala	Glu	Ala	Ser	Gln	Gly	Ser
	130					135					140				
Trp	Val	Gly	Trp	Val	Leu	Arg	Pro	Pro	Gln	Thr	Ser	Thr	Glu	Thr	Cys
145				150						155				160	
Pro	Cys	Ala	Val	Cys	Thr	Leu	His	Ser	Leu	Pro	Cys	Leu			
			165						170						

<210> 4861

<211> 1622

<212> DNA

<213> Homo sapiens

<400> 4861

ctgcagactt ccggcggcgc gctgcaggcg cggggaacac caatggcggg gtacttgaag
 60

ctggtgtgtg tttcctttca gcgtcaaggg ttccacactg ttgggagtcg ctgcaagaat
120
cggacaggcg ctgagcacct gtggctgacc cgacatctca gggacccatt tgtgaaggct
180
gcgaaggtgg agagttaccg gtgtcgaagc gccttcaagc tcctggaggt gaacgagagg
240
caccagattc tgcggcccgg ccttcgggtg ttagactgtg gggcagctcc tggggcctgg
300
agtcagggtg cgtgcagaa ggtcaacgcc gcaggcacag atcccagctc tcctgttggc
360
ttcgtgcttg gggtagatct tcttcacata tccccctgg aaggagcaac ttttctgtgc
420
cctgctgacg tgactgaccc gagaacctca cagagaatcc tcgagggtgct tcctggcagg
480
agagcagatg tgattctgag cgacatggcg cccaatgcc aagggttccg ggacctcgat
540
catgacaggc tcatcagcct gtgcctgacc cttctcagcg tgaccccgaga catcctgcaa
600
cctgggggga cattcctttg taaaacctgg gctggaagtc aaagccgtcg gttacagagg
660
agactgacag aggaattcca gaatgtaagg atcatcaaac ctgaagccag caggaaagag
720
tcatcagaag tgtacttctt ggccacacag taccacggaa ggaagggcac tgtgaagcag
780
tgaggatttc ttgtgccatt ttcataatgg tcattagctc cttttaagct agaaacgtag
840
cctgagctcc tgaagagttc ctgggagatt tgagctgatt ttggagatgg agcaggacaa
900
gtggggagtc tctctctctc tttctctctc tctcttttta accaaaaaga gatgacaaaa
960
ctaagttcag gggccatgga aaatgaaaaa gtccgctata ttgtgatttg ggaagagaaa
1020
gttatcaaga gaaagagggt aggatggaag gatggagaaa aacagactgt ggggaaggatc
1080
agaaggaatc cgccgaggca gggatgggtg tgcccatgtg tgccttgacg ggacttcac
1140
ttatagactg ttaaactgtc acacacaaac aggcctttcca cccctgctct gagagcacca
1200
cgcacagatt tccagttctt agtgtggctg tttaaagtag aaaatctggg ggctgggtga
1260
ggccactcat gcctgtaaac ccagggtttt agaaggctga ggctggggga ttgcttgaag
1320
tcaggagttc aagaccaacc tgggcaacat agcaacaccc cccatgtcta caaaaatgaa
1380
aaacccaaaa gcaaaccaaa agaaaaatct gaaatttcca tctggggatt aacttctgtc
1440
tttctgggtga acaatatagc aattcacgca ttcttcaagc agcaaaagtt cccggaacaa
1500
ttagggaaga cgtatggtct gaatttatcc aggcagtggg tctgctttgg tttttgctgg
1560
aaatttatat cagtgtctgg gctcccaaga acataaatgt aattgcaaaa gcaaaaaaaa
1620
aa
1622

<210> 4862
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 4862
 Leu Gln Thr Ser Gly Gly Ala Leu Gln Ala Arg Gly Thr Pro Met Ala
 1 5 10 15
 Gly Tyr Leu Lys Leu Val Cys Val Ser Phe Gln Arg Gln Gly Phe His
 20 25 30
 Thr Val Gly Ser Arg Cys Lys Asn Arg Thr Gly Ala Glu His Leu Trp
 35 40 45
 Leu Thr Arg His Leu Arg Asp Pro Phe Val Lys Ala Ala Lys Val Glu
 50 55 60
 Ser Tyr Arg Cys Arg Ser Ala Phe Lys Leu Leu Glu Val Asn Glu Arg
 65 70 75 80
 His Gln Ile Leu Arg Pro Gly Leu Arg Val Leu Asp Cys Gly Ala Ala
 85 90 95
 Pro Gly Ala Trp Ser Gln Val Ala Val Gln Lys Val Asn Ala Ala Gly
 100 105 110
 Thr Asp Pro Ser Ser Pro Val Gly Phe Val Leu Gly Val Asp Leu Leu
 115 120 125
 His Ile Phe Pro Leu Glu Gly Ala Thr Phe Leu Cys Pro Ala Asp Val
 130 135 140
 Thr Asp Pro Arg Thr Ser Gln Arg Ile Leu Glu Val Leu Pro Gly Arg
 145 150 155 160
 Arg Ala Asp Val Ile Leu Ser Asp Met Ala Pro Asn Ala Thr Gly Phe
 165 170 175
 Arg Asp Leu Asp His Asp Arg Leu Ile Ser Leu Cys Leu Thr Leu Leu
 180 185 190
 Ser Val Thr Pro Asp Ile Leu Gln Pro Gly Gly Thr Phe Leu Cys Lys
 195 200 205
 Thr Trp Ala Gly Ser Gln Ser Arg Arg Leu Gln Arg Arg Leu Thr Glu
 210 215 220
 Glu Phe Gln Asn Val Arg Ile Ile Lys Pro Glu Ala Ser Arg Lys Glu
 225 230 235 240
 Ser Ser Glu Val Tyr Phe Leu Ala Thr Gln Tyr His Gly Arg Lys Gly
 245 250 255
 Thr Val Lys Gln
 260

<210> 4863
 <211> 355
 <212> DNA
 <213> Homo sapiens

<400> 4863
 ctgggggctc actttcgggt gcacctggtg aagatgggtca ttctgacaga gcctgagggt
 60
 gccccaata tcacagccaa cctcacctcg tccctgctga gcgtctgtgg gtggagccag
 120
 accatcaacc ctgaggacga cacggatcct ggccatgctg acctggctct ctatatcact
 180

aggtttgacc tggagttgcc tgatggtaac nccggcagtgc ggggcgtcac ccagctgggc
 240
 ggggcctgct ccccaacctg gagctgctc attaccgagg aactggctt cgacctggga
 300
 gtcaccattg cccatgagat tgggcacagc ttcggcctgg agcacgacgg cgcgc
 355

<210> 4864
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 4864
 Leu Gly Ala His Phe Arg Val His Leu Val Lys Met Val Ile Leu Thr
 1 5 10 15
 Glu Pro Glu Gly Ala Pro Asn Ile Thr Ala Asn Leu Thr Ser Ser Leu
 20 25 30
 Leu Ser Val Cys Gly Trp Ser Gln Thr Ile Asn Pro Glu Asp Asp Thr
 35 40 45
 Asp Pro Gly His Ala Asp Leu Val Leu Tyr Ile Thr Arg Phe Asp Leu
 50 55 60
 Glu Leu Pro Asp Gly Asn Xaa Ala Val Arg Gly Val Thr Gln Leu Gly
 65 70 75 80
 Gly Ala Cys Ser Pro Thr Trp Ser Cys Leu Ile Thr Glu Asp Thr Gly
 85 90 95
 Phe Asp Leu Gly Val Thr Ile Ala His Glu Ile Gly His Ser Phe Gly
 100 105 110
 Leu Glu His Asp Gly Ala
 115

<210> 4865
 <211> 444
 <212> DNA
 <213> Homo sapiens

<400> 4865
 accggtgaga agccctacaa atgtgaggtc tgcagcaagg ccttctccca gagctctgac
 60
 ctcacaaac accagcgac ccacactggc gagcgccctt acaaatgtcc ccgttgcggc
 120
 aaggccttcg ccgacagctc ttacctgctt cgccaccagc gcactcactc tggccagaag
 180
 ccctacaagt gccacattg tggcaaggcc ttcggcgaca gctcctacct cctgcgacac
 240
 cagcgacccc acagccacga gcggccctac agctgcaccg agtgcggcaa gtgctatagc
 300
 cagaactcgt ccctgcgcag ccatcagagg gtgcacaccg gtcagaggcc cttcagctgt
 360
 ggcatctgcg gcaagagctt ctcccagcgg tcggccctta tccccatgc ccgcagccac
 420
 gcccgggaga agcccttcac gcgt
 444

<210> 4866

<211> 148
 <212> PRT
 <213> Homo sapiens

<400> 4866

```

Thr Gly Glu Lys Pro Tyr Lys Cys Glu Val Cys Ser Lys Ala Phe Ser
 1           5           10           15
Gln Ser Ser Asp Leu Ile Lys His Gln Arg Thr His Thr Gly Glu Arg
      20           25           30
Pro Tyr Lys Cys Pro Arg Cys Gly Lys Ala Phe Ala Asp Ser Ser Tyr
      35           40           45
Leu Leu Arg His Gln Arg Thr His Ser Gly Gln Lys Pro Tyr Lys Cys
      50           55           60
Pro His Cys Gly Lys Ala Phe Gly Asp Ser Ser Tyr Leu Leu Arg His
      65           70           75           80
Gln Arg Thr His Ser His Glu Arg Pro Tyr Ser Cys Thr Glu Cys Gly
      85           90           95
Lys Cys Tyr Ser Gln Asn Ser Ser Leu Arg Ser His Gln Arg Val His
      100          105          110
Thr Gly Gln Arg Pro Phe Ser Cys Gly Ile Cys Gly Lys Ser Phe Ser
      115          120          125
Gln Arg Ser Ala Leu Ile Pro His Ala Arg Ser His Ala Arg Glu Lys
      130          135          140
Pro Phe Thr Arg
145

```

<210> 4867
 <211> 391
 <212> DNA
 <213> Homo sapiens

<400> 4867

```

ggatcccaga gggagttcta tctggacttg cccaagcag gttgctaggc agtagcctca
60
tatccttggt gggaggatga gaaggacaaa aagaggcaac cagcctaggg acatcggcct
120
ccttctccac atccccattc tggtaggaaa agtcacccat gccaggatat cccagccca
180
gagacagccc cagggggtgc tgcctggaga cagccgggat agcttcagtc tctgaccct
240
gacacgggct gcaccaccag acaatgggca ttttcaggcc agactctggc acaaagagaa
300
ggggcagggc caaggctatg gccacaagc tcctcagcag ctgagatggg tgcaggaggt
360
agcgtcttac tcccatagct cccactgta t
391

```

<210> 4868
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 4868

Met Gly Val Glu Arg Tyr Leu Leu His Pro Ser Gln Leu Leu Arg Ser

```

      1           5           10           15
Leu Trp Ala Ile Ala Leu Ala Leu Pro Leu Leu Phe Val Pro Glu Ser
      20           25           30
Gly Leu Lys Met Pro Ile Val Trp Trp Cys Ser Pro Cys Gln Gly Gln
      35           40           45
Glu Thr Glu Ala Ile Pro Ala Val Ser Arg Gln His Pro Leu Gly Leu
      50           55           60
Ser Leu Gly Trp Gly Tyr Pro Gly Met Gly Asp Phe Ser Tyr Gln Asn
      65           70           75           80
Gly Asp Val Glu Lys Glu Ala Asp Val Pro Arg Leu Val Ala Ser Phe
      85           90           95
Cys Pro Ser His Pro Pro Thr Lys Asp Met Arg Leu Leu Pro Ser Asn
      100          105          110
Leu Leu Gly Ala Ser Pro Asp Arg Thr Pro Ser Gly Ile
      115          120          125

```

<210> 4869

<211> 418

<212> DNA

<213> Homo sapiens

<400> 4869

```

cccgggaaga gggtcgcccc ccataaatgc ggaaacagtt aaatggcgat gggaatagga
60
tggaactca atggtgttgc tacctttgga tggactcgga ggcagcccag cttcctggga
120
caggactgca cggactgcct ggggaggggt ctttggcccc ccggttcctg caggggggct
180
cggggaggcc ctgtgagcag ttggtcacag gtgggtccca ttcgatgcga tcctgttctt
240
ccccaacagc cctggagaag ggggacgttg cctgctgtgg ctgcggctgt tttcctggcc
300
tgtgagaggc ggggccagag tggccgttgg gaatctgggt gttgcaagggt gaccacaaac
360
agctctctgg gggaggagga ggaaaatgca attgattttc aggagccttc tgaggctg
418

```

<210> 4870

<211> 125

<212> PRT

<213> Homo sapiens

<400> 4870

```

Met Ala Met Gly Ile Gly Trp Glu Leu Asn Gly Val Ala Thr Phe Gly
      1           5           10           15
Trp Thr Arg Arg Gln Pro Ser Phe Leu Gly Gln Asp Cys Thr Asp Cys
      20           25           30
Leu Gly Arg Gly Leu Trp Pro Pro Gly Ser Cys Arg Gly Ala Arg Gly
      35           40           45
Gly Pro Val Ser Ser Trp Ser Gln Val Gly Pro Ile Arg Cys Asp Pro
      50           55           60
Val Pro Pro Gln Gln Pro Trp Arg Arg Gly Thr Leu Pro Ala Val Ala
      65           70           75           80
Ala Ala Val Phe Leu Ala Cys Glu Arg Arg Gly Gln Ser Gly Arg Trp

```

	85		90		95
Glu Ser Gly Cys Cys Lys Val Thr Thr Asn Ser Ser Leu Gly Glu Glu					
	100		105		110
Glu Glu Asn Ala Ile Asp Phe Gln Glu Pro Ser Glu Val					
	115		120		125

<210> 4871

<211> 1354

<212> DNA

<213> Homo sapiens

<400> 4871

nnntttttttt tttttttttt tttttctaga atccgcttta ttatggcacc tgggtgggtct
60

ggtgggatct gagggaggaa gaggtgcag tcttgctggg cagccccctg gtcagtccag
120

cagccccctca ggccatgctg ctgctcagct gcatggcaaa gtctgcaca tgctccttca
180

gagtctggcg ggcatctgcc tgtgccgct tctcccgctg ccgctcctgc tgcagcttgg
240

tcagtctcaa ccgcagccgc tgctcccgcc gcttgaggc ctgcagctgg cgctgggcct
300

tgtcaagggc atcaagggt gcttggtcgc ccgcttccag agtaaggcgc tgcccacctg
360

gtagctgtgt tcattctgga ttaggtctcc ggccgggtggg ggccaggcag catatacgt
420

gagggggaga ctggccgtgg ttcgagaggg gagggctgcc gctctggtga aggctgggcg
480

ctgcagcctg cttcatctgc ctgggcaccc aaggggcca gtaggtctga aaaggggctg
540

ctaaggccag gctccagcct ccagctggg gagggccgca aagtggcagg tgctgaggcc
600

tcttcacag gaaagcaggt gacatcagca ggtggagggtg gagaaaatgg agttgtgggc
660

cctcgccct cgagcagcg cttcctgcat cgtctaagcc ggctgacttc aggggggcca
720

ggtgggtaac tgtgtcctt ggtcttggt gtccggcgca acttgagaa agactcaaat
780

atggtgggga ctgccccctc ctttagcctg tgatatccac tgattccac cagctcaaag
840

cagtcctcct caaagtgtt ggagcagaag tagatgtact cggatgccg gtcccacagg
900

ccctggccgc tgggtgccag ccgctggcag ttggccagcc acaagcctg cctcggttg
960

tccttcttg gaagtctgtg gagccacaaa cccgtgagca ccaggctgtc cacagccctg
1020

ggctcatgct gcccaagcac ccagagggg aaacgcagac ccaacacgcg ccgccacag
1080

acctccctgc gaccccgccg ggtaagcacc accgcccggg cacagacgag gcaacggagg
1140

cctcgagaag aaaagcagtt tcctcagcgt catctggcag gtaacagagt ggggcgggtc
1200

caagccggt agacttccg tcctccctt cccgactgca ttcagtccg ccgggaccgt
1260

tccgcttcac ctcccaccca cagggttcaag cctcctcagt atctgagaaa ggcgcgaagc
 1320
 ctctacgcag ttgcgacccg aggcgagcaa caac
 1354

<210> 4872
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 4872
 Gly Arg Lys Arg Leu Gln Ser Cys Trp Ala Ala Pro Arg Ser Val Gln
 1 5 10 15
 Gln Pro Leu Arg Pro Cys Cys Cys Ser Ala Ala Trp Gln Ser Pro Ala
 20 25 30
 His Ala Pro Ser Glu Ser Gly Gly His Leu Pro Val Pro Ala Ser Pro
 35 40 45
 Val Pro Ala Pro Ala Ala Ala Trp Ser Val Ser Thr Ala Ala Ala Ala
 50 55 60
 Pro Ala Ala Cys Arg Pro Ala Ala Gly Ala Gly Pro Cys Gln Gly His
 65 70 75 80
 Gln Gly Leu Pro Gly Ser Pro Leu Pro Glu
 85 90

<210> 4873
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 4873
 nccccctag gatgcagaaa gtagatgaca ttccatccac actgtgtgag caaattggag
 60
 agattgcctt gatagaggac tgatgttttt cactgatgag atggtgacca aaagccagcc
 120
 ccactgtgag ttgaactctt tcgtgttgac cggccactct ccggtgctctg gatgatgtcg
 180
 gaacacgacc tggccgatgt ggttcaaatt gcagtggaag acctgagccc tgaccaccca
 240
 ggtacagagc tgtgggacag tggtgttttg gagaatcatg tagtgacaga tgaagacgaa
 300
 cctgctttga aacgccagcg actagaaatc aattgccagg atccatctat aaagtcattc
 360
 ctgtattcca tcaaccagac aatctgcttg cggttgata gcattgaagc caaattgcaa
 420
 gccctggagg ctacttgtaa atccttagaa gaaaagctgg atctggtcac gaacaagcag
 480
 cacagcccca tccaggttcc catggtggcc ggctccctc tcaggacaac ccagatgtgc
 540
 aacaaagtgc gatggtgaaga acagaccagg gtgccggggc cttcaggtca cttggggaga
 600
 agcgcgtcac ctctcgccc atgccgcag cttagtggct cagtttgctg gagatgcgca
 660
 gtgtctgect cagcagtctc agcagtttct aactaaagct gacttttagtt agaccgaaac
 720

cgaacacatg gcacccctgcc aggatgacct gaagtcaccc tcaccccttcc ttccacata
 780
 aagccggccc atacaccttt tctttggaac taaccaccca gatcttagaa gatgtacacg
 840
 tgcttcttcc ctttttcccta ctctacctgg ctagtcttta gatatgtttt tcttcgtatg
 900
 tgggtgtttat acatttcaca tgaatatatc aaacttttca ttcaaaaa
 948

<210> 4874

<211> 128

<212> PRT

<213> Homo sapiens

<400> 4874

Met	Met	Ser	Glu	His	Asp	Leu	Ala	Asp	Val	Val	Gln	Ile	Ala	Val	Glu
1				5					10					15	
Asp	Leu	Ser	Pro	Asp	His	Pro	Gly	Thr	Glu	Leu	Trp	Asp	Ser	Val	Val
			20					25					30		
Leu	Glu	Asn	His	Val	Val	Thr	Asp	Glu	Asp	Glu	Pro	Ala	Leu	Lys	Arg
		35				40					45				
Gln	Arg	Leu	Glu	Ile	Asn	Cys	Gln	Asp	Pro	Ser	Ile	Lys	Ser	Phe	Leu
	50				55					60					
Tyr	Ser	Ile	Asn	Gln	Thr	Ile	Cys	Leu	Arg	Leu	Asp	Ser	Ile	Glu	Ala
65				70					75					80	
Lys	Leu	Gln	Ala	Leu	Glu	Ala	Thr	Cys	Lys	Ser	Leu	Glu	Glu	Lys	Leu
			85					90						95	
Asp	Leu	Val	Thr	Asn	Lys	Gln	His	Ser	Pro	Ile	Gln	Val	Pro	Met	Val
			100					105					110		
Ala	Gly	Ser	Pro	Leu	Arg	Thr	Thr	Gln	Met	Cys	Asn	Lys	Val	Arg	Trp
		115				120							125		

<210> 4875

<211> 1255

<212> DNA

<213> Homo sapiens

<400> 4875

ntgtacagtc gattccattt ggcccgggga tggtcacacg cgcgggggcc ggaactgccg
 60
 tcgcccggcg ggtcgttgtc gcattgctct cggccgcact cgcgctgtac gggccgccac
 120
 tggacgcagt tttagaaaga gcgttttcgc tacgtaaagc acattcgata aaggatatgg
 180
 aaaatacttt gcagctgggtg agaaatatca tacctcctct gtcttcaca aagcaciaag
 240
 ggcaagatgg aagaataggc gtagttggag gctgtcagga gtacactgga gcccacatatt
 300
 ttgcagcaat ctacgctctc aaagtgggag cagacttgct ccacgtgttc tgtgccagt
 360
 cggccgcacc tgtgattaag gcctacagcc cggagctgat cgtccacca gttcttgaca
 420
 gccccaatgc tgttcattgag gtggagaagt ggctgccccg gctgcatgct cttgtcgtag
 480

gacctggcctt gggtagagat gatcgtccac ccagttcttg acagcccaa tgctgttcat
 540
 gaggtggaga agtggctgcc ccggctgcat gctcttgctg taggaactgg cttgggtaga
 600
 gatgatgcgc ttctcagaaa tgtccagggc attttggaag tgtcaaaggc cagggacatc
 660
 cctgttgctca tcgacgcgga tggcctgtgg ctggctcgctc agcagccggc cctcatccat
 720
 ggctaccgga aggctgtgct cactcccaac cacgtggagt tcagcagact gtatgacgct
 780
 gtgctcagag gccctatgga cagcgatgac agccatggat ctgtgctaag actcagccaa
 840
 gccctgggca acgtgacggt ggtccagaaa ggagagcgcg acatcctctc caacggccag
 900
 caggtgcttg tgtgcagcca ggaaggcagc agccgcaggt gtggagggca aggggacctc
 960
 ctgtcgggct ccttgggcgt cctggtacac tgggcgctcc ttgctggacc acagaaaaca
 1020
 aatgggtcca gccctctcct ggtggcgcg tttgggcct gctctctcac caggcagtgc
 1080
 aaccaccaag ccttccagaa gcacggctgc tccaccacca cctccgacat gatcgccgag
 1140
 gtgggggccc ccttcagcaa gctctttgaa acctgagccc gcgcagacca gaagtaaaca
 1200
 ggcaccttgg acgggggaga gcgtgtgtgt gatgggaaaa tccggaccca cgcgt
 1255

<210> 4876

<211> 230

<212> PRT

<213> Homo sapiens

<400> 4876

Leu	Ala	Trp	Val	Glu	Met	Ile	Val	His	Pro	Val	Leu	Asp	Ser	Pro	Asn
1				5					10					15	
Ala	Val	His	Glu	Val	Glu	Lys	Trp	Leu	Pro	Arg	Leu	His	Ala	Leu	Val
			20					25					30		
Val	Gly	Thr	Gly	Leu	Gly	Arg	Asp	Asp	Ala	Leu	Leu	Arg	Asn	Val	Gln
			35				40					45			
Gly	Ile	Leu	Glu	Val	Ser	Lys	Ala	Arg	Asp	Ile	Pro	Val	Val	Ile	Asp
			50			55					60				
Ala	Asp	Gly	Leu	Trp	Leu	Val	Ala	Gln	Gln	Pro	Ala	Leu	Ile	His	Gly
65					70				75					80	
Tyr	Arg	Lys	Ala	Val	Leu	Thr	Pro	Asn	His	Val	Glu	Phe	Ser	Arg	Leu
				85				90						95	
Tyr	Asp	Ala	Val	Leu	Arg	Gly	Pro	Met	Asp	Ser	Asp	Asp	Ser	His	Gly
			100				105						110		
Ser	Val	Leu	Arg	Leu	Ser	Gln	Ala	Leu	Gly	Asn	Val	Thr	Val	Val	Gln
			115				120				125				
Lys	Gly	Glu	Arg	Asp	Ile	Leu	Ser	Asn	Gly	Gln	Gln	Val	Leu	Val	Cys
			130				135				140				
Ser	Gln	Glu	Gly	Ser	Ser	Arg	Arg	Cys	Gly	Gly	Gln	Gly	Asp	Leu	Leu
145				150					155					160	
Ser	Gly	Ser	Leu	Gly	Val	Leu	Val	His	Trp	Ala	Leu	Leu	Ala	Gly	Pro

[illegible]

```
<210> 4877
<211> 1182
<212> DNA
<213> Homo sapiens
```

```

<400> 4877
ntttttttttt ctttgttttc ttaagactct cttccctgca gcgccatcag cttagggacc
60
acttgatctt ggtcactgct ccatgccgga gcctgggaag gagcctggcc caggtcgccg
120
gttcaatgaa tgcgtgcgga atgaatgaac gactctagtg aaagagactc caatgacgca
180
ggccgggatt tgcggacacg agccccgcgc cgcaagcat tctggggatt gtagtttctc
240
cgtgacgcgg tgactcgagc agcactgacg cactctgcgc ccggaggaca gagcggcccc
300
gtcgccggca tggtttctcc gtccctgctgc agccggcggg aggcagccag tccaggcgcc
360
cgctagcttc ggccggcgacc cagacgggga aagcggaagg aatgtcgcgt gcaagcagggc
420
agctgggtgtg gaagaatggc ggtgagccat tcagtgaagg agcggaccat ctctgagaac
480
agcctgatca tcctactgca gggcctccag ggccgggtaa ccactgtgga cctgcgggat
540
gagagcgtgg ccacaggacg catagacaat gtcgatgctt tcatgaacat ccgcctggcc
600
aaagtcacct acacggaccg ttggggggcat caggtcaagc tggatgacct ctttgtgaca
660
ggccgcaatg tccgctacgt ccacatccca gatgacgtga acatcacctc gaccattgag
720
cagcagctgc agattatcca tcgggtgcga aactttggtg gcaagggcca aggccgggtg
780
gaatttcccc caaaaaaact gtaagtgagg ccctcagcaa gccctggccc caactcggag
840
tcctccagtg atctccggag ctagtccct gccctcacac cctgtctggt acccgagaag
900
aaagcagggc caggccagaa gctgggtgtcc aacagacacc acctgtcaaa gctgccttc
960
acagggttcc acctcccaga ctactctgg gaccagaat cctatatgtg gccttgggg
1020
aggtgacaat ccccttttt gatgatctga atctctgact tattgattat ggaacctgtc
1080
aagtagtttt caactctccc agtgaggata attaaacatg cttagcctga gccacctcta
1140

```

agtgtctcca tttctcatgc agttgtgttc attttctcat ga
1182

<210> 4878

<211> 122

<212> PRT

<213> Homo sapiens

<400> 4878

Met	Ala	Val	Ser	His	Ser	Val	Lys	Glu	Arg	Thr	Ile	Ser	Glu	Asn	Ser
1				5					10					15	
Leu	Ile	Ile	Leu	Leu	Gln	Gly	Leu	Gln	Gly	Arg	Val	Thr	Thr	Val	Asp
			20					25					30		
Leu	Arg	Asp	Glu	Ser	Val	Ala	His	Gly	Arg	Ile	Asp	Asn	Val	Asp	Ala
			35				40					45			
Phe	Met	Asn	Ile	Arg	Leu	Ala	Lys	Val	Thr	Tyr	Thr	Asp	Arg	Trp	Gly
	50				55						60				
His	Gln	Val	Lys	Leu	Asp	Asp	Leu	Phe	Val	Thr	Gly	Arg	Asn	Val	Arg
65				70					75					80	
Tyr	Val	His	Ile	Pro	Asp	Asp	Val	Asn	Ile	Thr	Ser	Thr	Ile	Glu	Gln
			85					90					95		
Gln	Leu	Gln	Ile	Ile	His	Arg	Val	Arg	Asn	Phe	Gly	Gly	Lys	Gly	Gln
			100				105						110		
Gly	Arg	Trp	Glu	Phe	Pro	Pro	Lys	Lys	Leu						
		115					120								

<210> 4879

<211> 1941

<212> DNA

<213> Homo sapiens

<400> 4879

gttctggttc gccatcagca tcgccatcaa caatgcctac atcctgtaca aaatgtcaga
60
cgcctaccac gtgaagaggt acagccgggc gcagtttga gagagactcg tcagagagct
120
gctgggcttg gaggatgcct ctccgaccca ctgatgctgg gggcgagga ctcggtcaag
180
ggaggggcaa gaggaggagg agagcctgcc gttccaactt gccatcaga gaccggaca
240
cggcctggtg tgtggcttgc tgctgggag ggatgcacag ggcctcctga gggacaggat
300
ggacctggtc agaggacggt tgctgtcctc atttgctttc caagaagagc atgtcctccc
360
tcgagaaaca gtgccggcgg tgtgatgagc acttacacc acgttctcaa gggcagattc
420
tctcatgaca tccgtggagc ttgcgaggca gcgtggactg gtgactgtga aggaaggccc
480
ccgtggtaga atgagctgga gcacgtctta agagagatgc ctgcttcta aagatctaca
540
gcaatctggg acgtgggtta agttcaagac ttgaaggaag caaagacgcc ctgcatgggt
600
acaatggctc aggtgtcagg ggaggccgga ggttttccag catttgctc atgccagcac
660

ctttgaaccg gtctcttaga agaagacaca catcctgggt gtacagtggg gaaatgggga
 720
 gtgggtgccc attctgaaaa acgaggcatt cctgctcatt ccctctgctt agctgggtggg
 780
 caggggagag agggaaatgc caaaaacttg gagtgaagga tgatgctatt ttttattttt
 840
 aaatatatct tcaggttatt ttcttactgt tgcttcagat ctaatgtaaa aggcagatgt
 900
 cccctcctct ccacccccga cgctgacccc ggcctcagtc acggctcttt gcatgatcac
 960
 agttctgtgt tctggcctgt ggcagggccg ggaagggccg ctggcttccg aacagacgtg
 1020
 gttgctctcc acgaggcgca tggggagccc gcgggcccta agctttgtcg cagatgtcat
 1080
 cattggcaga attacttgct ttgaaaaata agtagcattg ctgaaacaca caaccgaatt
 1140
 ctctacgatg gccatttgct cattgtcttt cctctgtgtg tagtgagtga ccctggcagt
 1200
 gtttgctgct tcagagtggc ccctcagaac aacagggctg gccttggaaa aacccccaaa
 1260
 caggactgtg gtgacaactc tggtcagggtg tgatttgaca tgagggccgg aggcggttgc
 1320
 tgacggcagg actggagagg ctgctgcccc ggcactggca gcgaggctcg tgtgtcccc
 1380
 aggcagatct gggcactttc ccaacccagg tttatgcgtc tccagggag cctcgggtgc
 1440
 agagtgggtg gcagatctga ccatccccac agaccagaaa caaggaattt ctgggattac
 1500
 ccagtcccc ttcaaccag ttgatgtaac cacctcattt tttacaaata cagaatctat
 1560
 tctactcagg ctatgggcct cgtcctcact cagttattgc gagtgttgc gtccgcatgc
 1620
 tccgggcccc acgtggctcc tgtgctctag atcatggtga ctccccgcc ctgtggttgg
 1680
 aatcgatgcc acggattgca ggccaaattt cagatcgtgt ttccaaacac ccttgcgtgtg
 1740
 cccctttaatg ggattgaaag cacttttacc acatggagaa atatattttt aatttgtgat
 1800
 gcttttctac aaggtccact atttctgagt ttaatgtgtt tccaacactt aaggagactc
 1860
 taatgaaagc tgatgaattt tcttttctgt ccaacaagt aaaataaaaa taaaagtcta
 1920
 tttagatgtt gaaaaaaaaa a
 1941

<210> 4880

<211> 202

<212> PRT

<213> Homo sapiens

<400> 4880

Met Val Arg Ser Ala His His Ser Gly Thr Glu Ala Ser Leu Glu Thr
 1 5 10 15
 His Lys Pro Gly Leu Gly Lys Cys Pro Asp Leu Pro Gly Gly His Thr

```

<400> 4881
nnntttttttt ttacatgtga gtcattcttt attagggagg aagcaagcag ggaagccaca
60
ggggttagaga acaggggtcac ctctccactc ccgccccctcc catttctccc ctcccaacct
120
ctagggttttg gatacatgac gcagcaactg atgaacctgg caggaggcgc agtggtgctg
180
gccttggagg gtggccatga cctcacagcc atctgtgacg cctctgaggc ctgtgtggct
240
gctcttcttg gtaacagggt gagccgtctc cctcccccat ccatgcttct gtcaggcagg
300
taagcccggc tctcaggact acccaaggaa caggcagatg ggatgggaca ggggtgggagt
360
ggccaagcct gaaacaagggt aggcgaagcg aaagcctctg ttccaagtta ggtccaggca
420
gcatctcctg gcctaggtag agtgtgcttg tggctagaag gctggggccc ctggggtggg
480
agtgagctgg gcctgtgggt ccctgaaaga ctggtggctg atgtactgtt ttctataggt
540
ggatccgggt tgaggaagaa gctggaaca gaaacccaac ctcaatgcc a tccgctctct
600
ggaggccgtg atccgggtgc acagtaatg tggagatggg acactcgctg agctcagact
660
gaaggatctt ggtggtaccc tgccccaccg tggccagatc ctagggcttc cggtgccagg
720

```

cagggtgacct gctgttggtc tggagtaaga ttctgtgag tgacctaggc agcaatggta
 780
 aatactgggg ctgcatgcag cgcctggcct cctgtccaga ctctgggtg cctagagtgc
 840
 caggggctga caaagaagaa gtggaggcag tgaccgcact ggcgtccctc tctgtgggca
 900
 tcctggctga agataggtaa tgccagacnc tgggccctgg gcccgagcc tctccaccgc
 960
 ttcattcctc cctgcttgaa gaccccggtt ccgctatgca gccaccccaa ccctcccagg
 1020
 cttcctgacc aggggtgaga ggaagcttag ctaaggccct tgctgcagcc ctggtgctcc
 1080
 agcatccac ccttgtccct cccacaggc cctcgagca gctggtggag gaggaagaac
 1140
 ctatgaatct ctaaggctct ggaaccatct gcccgccac catgcccttg ggacctggtt
 1200
 ctcttctaac cctggcaat agccccatt cctgggtctt tagagatcct gtgggcaagt
 1260
 agttggaacc agagaacagc ctgcctgctt tgacagttat cccagggagc gtgagaaaat
 1320
 ccctgggtct aga
 1333

<210> 4882

<211> 100

<212> PRT

<213> Homo sapiens

<400> 4882

Xaa	Phe	Phe	Phe	Thr	Cys	Glu	Ser	Phe	Phe	Ile	Arg	Glu	Glu	Ala	Ser
1				5					10					15	
Arg	Glu	Ala	Thr	Gly	Val	Glu	Asn	Arg	Val	Thr	Ser	Pro	Leu	Pro	Pro
			20					25					30		
Leu	Pro	Phe	Leu	Pro	Ser	Gln	Pro	Leu	Gly	Phe	Gly	Tyr	Met	Thr	Gln
		35					40				45				
Gln	Leu	Met	Asn	Leu	Ala	Gly	Gly	Ala	Val	Val	Leu	Ala	Leu	Glu	Gly
		50				55				60					
Gly	His	Asp	Leu	Thr	Ala	Ile	Cys	Asp	Ala	Ser	Glu	Ala	Cys	Val	Ala
65					70				75					80	
Ala	Leu	Leu	Gly	Asn	Arg	Val	Ser	Arg	Leu	Pro	Pro	Pro	Ser	Met	Leu
				85				90						95	
Leu	Ser	Gly	Arg												
				100											

<210> 4883

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 4883

nnagatctaa cagagaacct ggactgtctc ctatcatgat tcccgggaaa tategctctg
 60
 tttctggccg ggctgcgaac aacgtgaact gcgggcttca tctggttatt caaacatcat
 120

cgcttcctga aaaaaacaaa acaaaagctg accgtatgtc ctatcatcaa tggggaagac
 180
 caccttcggt tgttgaactt tcaacacaat tttataactc ggatacaaaa tatttcta
 240
 ctacagaagt taatatcggt ggatttatat gataaccaga ttgaagaaat tagtgggctt
 300
 tcgactctga gatgtcttcg tgccttctg ttggggaaaa acagaatcaa gaaaatctca
 360
 aatctggaga atctaaaaag cttagatgtc ttggatcttc atggaaatca gattaccaaa
 420
 attgaaaata ttaatcattt gtgtgagttg agagttttta atcttgccag gaacttttta
 480
 agtcatgttg ataatcttaa tgggctggat tcaactactg aacttaactt gcgacacaat
 540
 caaatcactt tcgtgagaga tgtggataat ttgccctgcc tccaacatct ctttctcagc
 600
 tttacaata tatctagttt tgacagtgtt tcttgcttg ctgactcttc ttccctctcg
 660
 gacatcacct ttgatggcaa tcccatagct caagagtcac ggtacaaaca cactgtcctt
 720
 cagaatatga tgcagctgcg ccagctagat atgaagagaa tcacggaaga agaaaggcgt
 780
 atggcatctg ttttagccaa aaaagaggaa gagaagaagc gggaaagtca taaacaatct
 840
 ttgcttaagg agaagaaaag gttaacaatt aacaacgtag ctcgacagtg ggacttgcaa
 900
 caacgagtag ccaatattgc tacaaatgaa gatagaaaag attctgactc tctcaggac
 960
 ccctgtcaga ttgatggaag caccctctct gcattcccag aggaaacagg gcctctagac
 1020
 tcaggactca acaatgcttt acaaggttta tctgtcatag acacatacct tgttgaagt
 1080
 gacggggata cactttccct atatgggtca ggagcactgg aatctctgga taggaattgg
 1140
 agtgttcaaa cagcaggaat gatcacaaca gtctccttca ctttcataga atttgatgaa
 1200
 atcgtccaag tgcttcctaa actgaagatt aagtttccta attctctgca ccttaaattc
 1260
 aaggaaacaa atcttgtaat gcagcaattt aacgcactag cccaactccg tcggtattga
 1320
 ccagttggac aattgatcct caaggaaatc cagttggtcc attttaacac t
 1371

<210> 4884<211> 410

<212> PRT

<213> Homo sapiens

<400> 4884

Thr	Ala	Gly	Phe	Ile	Trp	Leu	Phe	Lys	His	His	Arg	Phe	Leu	Lys	Lys
1				5				10						15	
Thr	Lys	Gln	Lys	Leu	Thr	Val	Cys	Pro	Ile	Ile	Asn	Gly	Glu	Asp	His
		20						25					30		
Leu	Arg	Leu	Leu	Asn	Phe	Gln	His	Asn	Phe	Ile	Thr	Arg	Ile	Gln	Asn
		35					40						45		

Ile Ser Asn Leu Gln Lys Leu Ile Ser Leu Asp Leu Tyr Asp Asn Gln
 50 55 60
 Ile Glu Glu Ile Ser Gly Leu Ser Thr Leu Arg Cys Leu Arg Val Leu
 65 70 75 80
 Leu Leu Gly Lys Asn Arg Ile Lys Lys Ile Ser Asn Leu Glu Asn Leu
 85 90 95
 Lys Ser Leu Asp Val Leu Asp Leu His Gly Asn Gln Ile Thr Lys Ile
 100 105 110
 Glu Asn Ile Asn His Leu Cys Glu Leu Arg Val Leu Asn Leu Ala Arg
 115 120 125
 Asn Phe Leu Ser His Val Asp Asn Leu Asn Gly Leu Asp Ser Leu Thr
 130 135 140
 Glu Leu Asn Leu Arg His Asn Gln Ile Thr Phe Val Arg Asp Val Asp
 145 150 155 160
 Asn Leu Pro Cys Leu Gln His Leu Phe Leu Ser Phe Asn Asn Ile Ser
 165 170 175
 Ser Phe Asp Ser Val Ser Cys Leu Ala Asp Ser Ser Ser Leu Ser Asp
 180 185 190
 Ile Thr Phe Asp Gly Asn Pro Ile Ala Gln Glu Ser Trp Tyr Lys His
 195 200 205
 Thr Val Leu Gln Asn Met Met Gln Leu Arg Gln Leu Asp Met Lys Arg
 210 215 220
 Ile Thr Glu Glu Glu Arg Arg Met Ala Ser Val Leu Ala Lys Lys Glu
 225 230 235 240
 Glu Glu Lys Lys Arg Glu Ser His Lys Gln Ser Leu Leu Lys Glu Lys
 245 250 255
 Lys Arg Leu Thr Ile Asn Asn Val Ala Arg Gln Trp Asp Leu Gln Gln
 260 265 270
 Arg Val Ala Asn Ile Ala Thr Asn Glu Asp Arg Lys Asp Ser Asp Ser
 275 280 285
 Pro Gln Asp Pro Cys Gln Ile Asp Gly Ser Thr Leu Ser Ala Phe Pro
 290 295 300
 Glu Glu Thr Gly Pro Leu Asp Ser Gly Leu Asn Asn Ala Leu Gln Gly
 305 310 315 320
 Leu Ser Val Ile Asp Thr Tyr Leu Val Glu Val Asp Gly Asp Thr Leu
 325 330 335
 Ser Leu Tyr Gly Ser Gly Ala Leu Glu Ser Leu Asp Arg Asn Trp Ser
 340 345 350
 Val Gln Thr Ala Gly Met Ile Thr Thr Val Ser Phe Thr Phe Ile Glu
 355 360 365
 Phe Asp Glu Ile Val Gln Val Leu Pro Lys Leu Lys Ile Lys Phe Pro
 370 375 380
 Asn Ser Leu His Leu Lys Phe Lys Glu Thr Asn Leu Val Met Gln Gln
 385 390 395 400
 Phe Asn Ala Leu Ala Gln Leu Arg Arg Tyr
 405 410

<210> 4885

<211> 489

<212> DNA

<213> Homo sapiens

<400> 4885

cttaagaagg aaaatatggc tgctctttgc cggacagcag agtcccagaa ccccatgcag
 60
 gtgtttcagg gctttatgtc attcaaggat gtggctgtga acttcactag gnaagaatgg
 120
 agagaactgg accttgctca gagagtcttg tacagggatg taatgctgga gaactatagg
 180
 aacctgggtct ccttggtagg atttccattt tccaaacctg gtatcatctc ctagttggaa
 240
 gaagtggtaa gcccacgaac acaaatgcag gagggagagg tgccaagaag cagcggatca
 300
 cgagaaagac agggctggag accagtttgc tgatagtgac cccaaccag aaaagttcat
 360
 tgggctgcac cctccagtag aactggacct gaggcagcta ggaataggat gcatgtttct
 420
 gaccctggcc aggatcagaa agaaggaaac ctctctgag ggtcttcagc agtgggaagag
 480
 ggcatgcag
 489

<210> 4886

<211> 77

<212> PRT

<213> Homo sapiens

<400> 4886

Leu	Lys	Lys	Glu	Asn	Met	Ala	Ala	Leu	Cys	Arg	Thr	Ala	Glu	Ser	Gln
1				5					10					15	
Asn	Pro	Met	Gln	Val	Phe	Gln	Gly	Phe	Met	Ser	Phe	Lys	Asp	Val	Ala
			20					25					30		
Val	Asn	Phe	Thr	Arg	Xaa	Glu	Trp	Arg	Glu	Leu	Asp	Leu	Ala	Gln	Arg
		35					40					45			
Val	Leu	Tyr	Arg	Asp	Val	Met	Leu	Glu	Asn	Tyr	Arg	Asn	Leu	Val	Ser
	50					55					60				
Leu	Val	Gly	Phe	Pro	Phe	Ser	Lys	Pro	Gly	Ile	Ile	Ser			
65					70					75					

<210> 4887

<211> 2271

<212> DNA

<213> Homo sapiens

<400> 4887

nntttttttt tttttttttt aaagggacac ctgcaccccc atgtttattg cagcaatatt
 60
 cacaatagcc ttgtagtttt agcgcttaga ggcattttaa cagcctctct cctccagact
 120
 acttcactgt agtttattat ccctgaccct ccacaatgtg attaccaacc gctaggatga
 180
 gttgcatctt attataaagt agcaaattac aagattgtaa cattagactt ttttaagaaa
 240
 tccagtcagc ttttatacta atccatctta atttctaggt tactcagaat tccaggtatt
 300
 ctgatttgga ctacatctc gtattgtatt gcctgtattt aactaggaag ttactgccaa
 360

cagcatctat ctctattaaa tgtagaggaa ttgacaaaag aggggaaaga aagttgttag
420
gtaatagaac tgcttcagaa atagggtat tcatgtttga agtgtttctc cttcgttttt
480
cagggcatct cattgggaga tattcctctt ccaggcagta tcagtgatgg catgaattct
540
tcagcacatt atcatgtaaa cttcagccag gctataagtc aggatgtgaa tcttcatgag
600
gccatcttgc tttgtcccaa caatacattt agaagagatc caacagcaag gacttcacag
660
tcacaagaac catttctgca gttaaattct cataccacca atcctgagca aacccttctt
720
ggaactaatt tgacaggatt tctttcaccg gttgacaatc atatgaggaa tctaacaagc
780
caagacctac tgtatgacct tgacataaat atatttgatg agataaactt aatgtcattg
840
gccacagaag acaactttga tccaatcgat gtttctcagc tttttgatga accagattct
900
gattctggcc tttctttaga ttcaagtcac aataatacct ctgtcatcaa gtctaattcc
960
tctcactctg tgtgtgatga aggtgctata gggtattgca ctgaccatga atctagtctc
1020
catcatgact tagaaggtgc tgtaggtggc tactaccag aaccagtaa gctttgtcac
1080
ttggatcaaa gtgattctga tttccatgga gatcttacat ttcaacacgt atttcataac
1140
cacacttacc acttacagcc aactgcacca gaatctactt ctgacncttt tccgnntgct
1200
gggaagtcac agaagataag gagtagatac cttgaagacc cagatagaac cttagccgt
1260
gatgaccagc gtgctaaagc tttgcatatc cttttttctg tagatgaaat tgtcggcatg
1320
cctgttgatt ctttcaatag catgttaagt agatattatc tgacagacct acaagtctca
1380
cttatccgtg acatcagacg aagagggaaa aataaagttg ctgcgcagaa ctgtcgtaaa
1440
cgcaaattgg acataatttt gaatttagaa gatgatgtat gtaacttgca agcaaagaag
1500
gaaactctta agagagagca agcacaatgt aacaaagcta ttaacataat gaaacagaaa
1560
ctgcatgacc tttatcatga tatttttagt agattaagag atgaccaagg taggccagtc
1620
aatcccaacc actatgctct ccagtgtacc catgatggaa gtatcttgat agtaccctaa
1680
gaactggtgg cctcaggcca caaaaaggaa acccaaaagg gaaagagaaa gtgagaagaa
1740
actgaagatg gactctatta tgtgaagtag taatgttcag aaactgatta tttggatcag
1800
aaaccattga aactgcttca agaattgtat ctttaagtac tgctacttga ataactcagt
1860
taacgtgtt ttgaagctta catggacaaa tgtttaggac ttcaagatca cacttgtggg
1920
caatctgggg gagccacaac ttttcatgaa gtgcattgta taaaaattc atagttatgt
1980

ccaaagaata gggttaacatg aaaacccagt aagactttcc atcttggcag ccaccccttt
 2040
 taagagtaag ttggttactt caaaaagagc aaacactggg gatcaaatta ttttaagagg
 2100
 tatttcagtt ttaaatagcaa aatagcctta ttttcattta gtttgtagc actatagtga
 2160
 gcttttcaaa cactattttta atctttatat ttaacttata aattttgctt tctatggaaa
 2220
 taaattttgt atttgtatta aaaattaact tttccctttt aaaaaaaaaa a
 2271

<210> 4888

<211> 429

<212> PRT

<213> Homo sapiens

<400> 4888

Gly	Tyr	Ser	Cys	Leu	Lys	Cys	Phe	Ser	Phe	Val	Phe	Gln	Gly	Ile	Ser
1				5				10						15	
Leu	Gly	Asp	Ile	Pro	Leu	Pro	Gly	Ser	Ile	Ser	Asp	Gly	Met	Asn	Ser
		20					25						30		
Ser	Ala	His	Tyr	His	Val	Asn	Phe	Ser	Gln	Ala	Ile	Ser	Gln	Asp	Val
	35					40					45				
Asn	Leu	His	Glu	Ala	Ile	Leu	Leu	Cys	Pro	Asn	Asn	Thr	Phe	Arg	Arg
50					55					60					
Asp	Pro	Thr	Ala	Arg	Thr	Ser	Gln	Ser	Gln	Glu	Pro	Phe	Leu	Gln	Leu
65					70					75				80	
Asn	Ser	His	Thr	Thr	Asn	Pro	Glu	Gln	Thr	Leu	Pro	Gly	Thr	Asn	Leu
			85					90					95		
Thr	Gly	Phe	Leu	Ser	Pro	Val	Asp	Asn	His	Met	Arg	Asn	Leu	Thr	Ser
	100						105						110		
Gln	Asp	Leu	Leu	Tyr	Asp	Leu	Asp	Ile	Asn	Ile	Phe	Asp	Glu	Ile	Asn
	115					120						125			
Leu	Met	Ser	Leu	Ala	Thr	Glu	Asp	Asn	Phe	Asp	Pro	Ile	Asp	Val	Ser
	130				135						140				
Gln	Leu	Phe	Asp	Glu	Pro	Asp	Ser	Asp	Ser	Gly	Leu	Ser	Leu	Asp	Ser
145					150					155				160	
Ser	His	Asn	Asn	Thr	Ser	Val	Ile	Lys	Ser	Asn	Ser	Ser	His	Ser	Val
			165					170						175	
Cys	Asp	Glu	Gly	Ala	Ile	Gly	Tyr	Cys	Thr	Asp	His	Glu	Ser	Ser	Ser
	180							185				190			
His	His	Asp	Leu	Glu	Gly	Ala	Val	Gly	Gly	Tyr	Tyr	Pro	Glu	Pro	Ser
	195						200					205			
Lys	Leu	Cys	His	Leu	Asp	Gln	Ser	Asp	Ser	Asp	Phe	His	Gly	Asp	Leu
	210					215					220				
Thr	Phe	Gln	His	Val	Phe	His	Asn	His	Thr	Tyr	His	Leu	Gln	Pro	Thr
225					230					235				240	
Ala	Pro	Glu	Ser	Thr	Ser	Asp	Xaa	Phe	Pro	Xaa	Ala	Gly	Lys	Ser	Gln
			245						250					255	
Lys	Ile	Arg	Ser	Arg	Tyr	Leu	Glu	Asp	Pro	Asp	Arg	Thr	Leu	Ser	Arg
		260						265					270		
Asp	Asp	Gln	Arg	Ala	Lys	Ala	Leu	His	Ile	Pro	Phe	Ser	Val	Asp	Glu
	275					280						285			
Ile	Val	Gly	Met	Pro	Val	Asp	Ser	Phe	Asn	Ser	Met	Leu	Ser	Arg	Tyr

```

      290              295              300
Tyr Leu Thr Asp Leu Gln Val Ser Leu Ile Arg Asp Ile Arg Arg Arg
305              310              315              320
Gly Lys Asn Lys Val Ala Ala Gln Asn Cys Arg Lys Arg Lys Leu Asp
      325              330              335
Ile Ile Leu Asn Leu Glu Asp Asp Val Cys Asn Leu Gln Ala Lys Lys
      340              345              350
Glu Thr Leu Lys Arg Glu Gln Ala Gln Cys Asn Lys Ala Ile Asn Ile
      355              360              365
Met Lys Gln Lys Leu His Asp Leu Tyr His Asp Ile Phe Ser Arg Leu
      370              375              380
Arg Asp Asp Gln Gly Arg Pro Val Asn Pro Asn His Tyr Ala Leu Gln
385              390              395              400
Cys Thr His Asp Gly Ser Ile Leu Ile Val Pro Lys Glu Leu Val Ala
      405              410              415
Ser Gly His Lys Lys Glu Thr Gln Lys Gly Lys Arg Lys
      420              425

```

<210> 4889
 <211> 619
 <212> DNA
 <213> Homo sapiens

```

<400> 4889
nntgtttttc actttattat acaaaaaagg gaaaacaaaa cttccacagt tggctttaag
60
cataggcaga cacctctaag ccactccctc ccacctccca tgatacaaat tcaagttgtg
120
gtggttggtg aatcctacaa aacactcctt aaatattaga aaagaagtta ggagctccca
180
gcacatttct tgaagcccag gttctgagcc tgggggtggcc aggcttggcc tctcagatga
240
acaggggaga ccttttccat caaatacaag ctttaagctt cacaccatct tgcctgcctt
300
tccgccttcc tgctggacaa tggagaccag cagctcggat gcatgtgact ctggcagagg
360
gagcctggtc tgggaagcat ccgagaatgg cttcagcaca ctccccctaa tggaatcaga
420
gactgggcaa aacagaggat gtggagaacg gggcagcctc agcctgctcc caccagggtc
480
aacatctccc ggccctcacc gacccttttt ccagattcac aacaaactga tgtgggctct
540
aggacagacc cctttacaca cacacacaca cactcacact cttttgcaca catccacagc
600
tgcacccatg ctatgtaca
619

```

<210> 4890
 <211> 90
 <212> PRT
 <213> Homo sapiens

```

<400> 4890
Leu Trp Gln Arg Glu Pro Gly Leu Gly Ser Ile Arg Glu Trp Leu Gln

```

1		5		10		15									
His	Thr	Pro	Pro	Asn	Gly	Ile	Arg	Asp	Trp	Ala	Lys	Gln	Arg	Met	Trp
		20		25		30									
Arg	Thr	Gly	Gln	Pro	Gln	Pro	Ala	Pro	Thr	Arg	Val	Asn	Ile	Ser	Arg
		35		40		45									
Pro	Ser	Pro	Thr	Leu	Phe	Pro	Asp	Ser	Gln	Gln	Thr	Asp	Val	Gly	Ser
		50		55		60									
Arg	Thr	Asp	Pro	Phe	Thr	His	Thr	His	Thr	His	Ser	His	Ser	Phe	Ala
65				70		75									80
His	Ile	His	Ser	Cys	Thr	His	Ala	Met	Tyr						
			85			90									

<210> 4891

<211> 1998

<212> DNA

<213> Homo sapiens

<400> 4891

```

ngggcaggac tgggtgggaca cagaagcggc cacagcctga cttgcaacat ttttctccag
60
cttgacaatt ctcattccatc acacagccaa caatgcacag gccaccaga acttttggac
120
aatcaccgcc ccgccctccc tcaatgtctc cgaggcaggt gcggccacag ccggtgctgc
180
agcatttatg cccctgggga caggatgcat ccccatcaca cagctcctca cacggaaggg
240
ggtcagcggg acattcacca ccaaactcct taggaatgtc tcggcagatc cgaccacagc
300
ctgtggtgca gcacttctgt tcagccggac acaattcatc gccctggcac agctctttgc
360
atgggttctt atcgggaggg cattctccct cttttgaagg cctctaagtg taactgtcct
420
gggcgaggcg cggcggttcg gttcccatgg taaccccgca gtcacagcgt cgcgcttccg
480
ggcgacgag cagcgcgctc cagtgcgctc acggcgccac tttccggccg gtgacagagt
540
ccagcggagt tgtggggggc gggggcgcca tgggagccac tggcgacgcc gagcagccgc
600
ggggacctag cggggccgag agggggcggt tggagctggg ggatgcgggc gcagcggggc
660
agctggttct tacggtgagg gcgccccga acccttgga cataatgata aagcaccggc
720
agggtcagcg gaggggcccgc cgctcacaga tgacaacaag tttcacagat cctgccatct
780
ccatggatct cctccgagct gtcctgcagc ccagcatcaa cgaggagatc cagactgtct
840
tcaacaagta cataaagttc ttccagaagg cagcactgaa cgtgcgagac aatgttgggg
900
aggaggtgga cgcagagcag ctgatccagg aagcctgtcg gagctgcctg gagcaggcta
960
naactgtctt tttcagatgg agaaaaagta ataccagat tgacccatga gcttccagga
1020
ataaagcgtg gccgtcaggc agaagaagaa tgtgcccatc gaggaagccc ccttcctaaa
1080

```

aagaggaaag gacggcctcc tggacacatc ctgtcaagcg accgggcagc cgccggcatg
 1140
 gtatggaaac caaaatcctg tgaaccaatt cgccgggaag gcccgaagtg ggaccagct
 1200
 cgctgaatg aatctaccac ctttgtgttg ggatctcgag ccaacaaagc cctggggatg
 1260
 gggggcacca gaggaagaat ctacatcaag cacccacacc tctttaagta tgcagctgac
 1320
 ccccaggata agcactggct ggctgagcag catcacatgc gggcaacagg gggcaagatg
 1380
 gcctacctcc tcatcgagga ggacatccgg gaccttgccg ccagtgatga ttacagagga
 1440
 tgcttgatc tgaagctaga ggaattgaaa tcctttgtcc taccctcctg gatggtggag
 1500
 aagatgagaa agtatatgga gacactacgg acagagaatg agcatcgtgc tgttgaagca
 1560
 cctccacaga cctgaggccg ggtcccctgg ccacacttgg cagccctcct ccaaagccct
 1620
 cttcctcacg tggctgaggc caccgctggg actgctccta gatggatctc agcggcatta
 1680
 agctgtgcct gagcgagttt gtagtgactc actgcacagc acccccagac tagcatgtgg
 1740
 ttctatattt gtaaagttat tgggataaga aacaattaaa cagttttagt taaacacaga
 1800
 tgggtgaacct gctgtgccct ctaccttggt ggaattgaca gaacatcaag ggctctagaa
 1860
 gtgggtgtag gaaaaaagga cgagataacc ctacccata acagtataga gccaggcttg
 1920
 ataagaccaa cctgggagca ccatgtaccc tgcccgtctt ccctttgccc attttagt
 1980
 tccttaccga gctaattg
 1998

<210> 4892

<211> 216

<212> PRT

<213> Homo sapiens

<400> 4892

Ser	Arg	Lys	Pro	Val	Gly	Ala	Ala	Trp	Ser	Arg	Leu	Xaa	Leu	Leu	Phe
1				5				10						15	
Ser	Asp	Gly	Glu	Lys	Val	Ile	Pro	Arg	Leu	Thr	His	Glu	Leu	Pro	Gly
		20						25					30		
Ile	Lys	Arg	Gly	Arg	Gln	Ala	Glu	Glu	Glu	Cys	Ala	His	Arg	Gly	Ser
		35					40					45			
Pro	Leu	Pro	Lys	Lys	Arg	Lys	Gly	Arg	Pro	Pro	Gly	His	Ile	Leu	Ser
	50					55					60				
Ser	Asp	Arg	Ala	Ala	Ala	Gly	Met	Val	Trp	Lys	Pro	Lys	Ser	Cys	Glu
65				70						75				80	
Pro	Ile	Arg	Arg	Glu	Gly	Pro	Lys	Trp	Asp	Pro	Ala	Arg	Leu	Asn	Glu
				85					90					95	
Ser	Thr	Thr	Phe	Val	Leu	Gly	Ser	Arg	Ala	Asn	Lys	Ala	Leu	Gly	Met
			100					105					110		
Gly	Gly	Thr	Arg	Gly	Arg	Ile	Tyr	Ile	Lys	His	Pro	His	Leu	Phe	Lys

```

      115              120              125
Tyr Ala Ala Asp Pro Gln Asp Lys His Trp Leu Ala Glu Gln His His
      130              135              140
Met Arg Ala Thr Gly Gly Lys Met Ala Tyr Leu Leu Ile Glu Glu Asp
145              150              155              160
Ile Arg Asp Leu Ala Ala Ser Asp Asp Tyr Arg Gly Cys Leu Asp Leu
      165              170              175
Lys Leu Glu Glu Leu Lys Ser Phe Val Leu Pro Ser Trp Met Val Glu
      180              185              190
Lys Met Arg Lys Tyr Met Glu Thr Leu Arg Thr Glu Asn Glu His Arg
      195              200              205
Ala Val Glu Ala Pro Pro Gln Thr
      210              215

```

<210> 4893

<211> 5212

<212> DNA

<213> Homo sapiens

<400> 4893

```

nnctaaagga gtcccctgga aggcctccac aacctcacgc tagagtcaag aatggatatg
60
ttcagcttgg atatgatcat cagtgaacca gctgcagaag ccagcagggc tgggaagaag
120
cagctcagag gtgttcagaa cccttgccca tctgccagag ccagaccccg gcacaagtcc
180
ctcaacataa aggacaagat atcagaatgg gaagggaaga aagaggtgcc cactcctgca
240
cccagcagga gagcagacgg acaggaggat tatctgccgt cctctacggt ggagaggagg
300
agtagtgatg gggtgagaac tcaggtcaca gaggctaaga atggaatgag gccaggaaca
360
gagagcacag agaaggagag gaataaagga gcagtgaacg tcggggggaca ggacccagag
420
ccggggcaag acctaagcca gccagaacgg gaagtggatc ctagctgggg ccgaggccga
480
gagccaagac ttggcaagct gcgctttcag aacgatcacc tctccgtgct gaagcaggtc
540
aagaaactcg agcaggcttt gaaggatggg tcggcagggc tggatcccca gttaccaggg
600
acttggtact cccacactg ccctcctgac aaggcagagg cagggtccac ccttcctgag
660
aacctgggag gcgggagtg ctcagaagtc agccagaggg tccaccctc ggacctggaa
720
ggcagggagc ccaccctga gcttgtggag gacaggaaag gttcatgcag aaggccctgg
780
gaccggagcc ttgagaacgt gtataggggc tcggaggggt ccccccacaa gcccttcac
840
aaccctctgc caaaaccccg gagaacgttc aaacatgccg gagaagggga caaagatggg
900
aagcctggca tcggcttcag gaaagagaaa agaaatctgc ctcctctgcc ctctctacct
960
cccccgctc tgccctctc tccccacct tcctctgtga acagaagact gtggaccggg
1020

```


agacagaaat ccagtgcaga ccacagaaag tcctatgagt ttgaagattt actgcagtct
1080
tcctctgaga gcagcagggg ggactggtac gcgcagacta agctggggct gacacgcact
1140
ttatcggagg agaacgtcta tgaagacatt ctatgatccgc caatgaagga gaacccttat
1200
gaggacatcg agttacatgg tcgctgcctg ggaaagaagn ntgtgtcttg aattttcctg
1260
cttctccac ctntctccat ccctgacaca ctcaccaagc agtcattgtc caaacctgct
1320
tttttccgac aaaattcaga gaggaggaac ttcaagctgc tggacactag gaagctgagt
1380
cgggatggaa ctgggtcccc ttccaaaatc agccctccct ccactcccag cagccctgat
1440
gacattttct ttaaccttgg agaccacag aacggcagga agaagagaaa gatacccaag
1500
ctggtgttgc gaatcaacgc cttttatgag gtccggagag gaaagaaacg ggtgaagagg
1560
ctgtcccagt caatggagag caactcagga aaagtgcag atgagaacag tgagtctgac
1620
agtgcacag aggagaagct gaaagctcac agccagcgcc tggtaacgt gaagtcccg
1680
ctgaagcagg cgctcggtta cccatcactt gcccggaac tcacagagta ccaggagagg
1740
cagctcttcg agtactttgt ggttgtgtct ttgcacaaga agcaggccgg ggtgcctac
1800
gtgccagaac tcaccaaca gtccctctg aagttggaaa ggtctttcaa gttcatgaga
1860
gaagctgagg accaactgaa ggccattccc cagttctgtt ttccgatgc caaggattgg
1920
gttctgtcc agcagttcac cagtgaaca ttctcgtttg tcttaactgg agaagatggg
1980
agcagaaggt tcggttactg ccgaagactg ctgcctggag gcaaaggaa gcgccttcct
2040
gaagtttact gcattgtgag ccgcctggga tgcttcagcc tcttttcaag gatcttggat
2100
gaggtggaaa aaagacgagg catctctcct gccctggttc agccactcat gagaagtgtc
2160
atggaagccc ctttccagc cctgggcaaa accatccttg tcaagaactt cctgccaggt
2220
tcaggaactg aggtgatcga actgtgccgc ccgctggact cccggctcga gcacgtggac
2280
tttgagtctc tcttctctc cctcagcgtc cgccacctgg tctgtgtgtt tgctccctg
2340
cttctggaga ggagggtcat cttcattgca gacaagctca gcacctgtc caagtgtgc
2400
cacgcgatgg tggcgctgat ctacccttc gcctggcagc acacctacat cccggtgctg
2460
ccaccgcca tggctgacat cgtgtgctc cgacgccct tctcatcgg gctgctctcc
2520
agctcgtgc cactgctcag ggagctgccg ctggaagagg tccttgtggt tgacctcgtc
2580
aacagccggt tcctcagaca gatggacgat gaggactcca tcctgccccg gaagcttcag
2640

gtggccctgg aacacattct ggaacagagg aacgagctgg cttgtgagca ggacgaaggg
2700
cccctagacg gcaggcacgg tccagagtcc agccccttga acgaggtggt gtctgaagcc
2760
tttgtccgct tcttcgtgga gattgtggga cactactctt tgttcctgac gtcgggagag
2820
cgtgaggaga gaaccctgca gcgggaggcc ttccgcaaag ctgtctcctc caagagcctc
2880
cgccacttcc tggaggtctt catggagact cagatgtttc ggggcttcat ccaggagcgg
2940
gagctgcgcc ggcaggatgc caaaggctctg tttgaggtcc gagcccaaga gtatctggaa
3000
acactcccca gtggagagca cagcgggtgtc aataagttcc tgaagggact aggcaataaa
3060
atgaaatttc tccacaagaa ataactctca gcctcaaggg aaaacttcct cctagtgcag
3120
ccctatgctt taaaaacagt tcctggtggc ctttctgaaa ggctgggtcc caggttgtca
3180
cgggtgcgga ctggaggccg cgggtgcttc tggccgaggc tgggctcttc cctggatgag
3240
gacctgggag ccgcctggga ggacagcccc agaaaggag cccgagacca ggcgtgtcgc
3300
cgacatgcaa atgggttgtt ttggtggttg ggtttttttt tttatcttag atattaaaag
3360
taagaaaaat gtgtgggttt tctgtttatt atgccaaggg caagaggagc ctgtcctgcc
3420
ctacacgttc ccctcgttcg tcccatccgg ccgctcagca atggagctaa gaggagtgg
3480
gatgggcaac agaaatgagg tgctcctcgg agcgggactg acgacacatg aggactgtga
3540
ggggaggagg cggagccggt gcctcgggtt caggagtgga ggcctcctag tgaaaggctg
3600
ggcccttgcc ctagagtgga ggctagggag gaacgggagc ttagacgga tgtggcttcc
3660
cagacacgct gctcttccag aaggacagt gatgccacct ggtggcagag gccatggacg
3720
tctctcttcc caaatggacc tgactcttct tgactgcctt gttctcttag aagaagccat
3780
ggaactgtcc actgcctgag tagtccttgg cttttagagg cacacacaca aaaagaggtc
3840
agtaaactgt tctaggggtc ttcaagtta cgacactgct cacggccac cttccaacac
3900
atagccacaa ctttgacccc gtcccatct cattccaggg gccagagca gcattaatgc
3960
aatagtggat gtgcactgcc tgtacacggt ggggggaggg gggacctttt gcggtgatg
4020
gtaacaagat ggaggggtgag aacgctgggg cggcgtcatg agcgtgtgc agccagagag
4080
gcagcttgcg ttttctggac cagaagcagg gaggggtgtg agaaggccaa aaacctcagg
4140
gcgacctaa agctgtcctg cagcggggac agtggggaca gcagggacag cggggaggga
4200
ggaaaagccc cgaacacagc tgaggcaggt tctcagagca agcctcaggg ccactaccag
4260

gtgacccctg ccctcagctc tcaccagcga ccctcacaga aacacaaaag ggagggggcg
 4320
 cgacctcaac aatggcccag agggggccata ctgcctggca ggggttctca acctttaggg
 4380
 agcgggagca aggggccttc cgaggataaa tagaaatgag gaaaatgagg ggaggtgacc
 4440
 tctcatcctt cctcttagct ggagttatgg accccctcgc ccctccaagt tctaccagg
 4500
 ctttggtgtg tccattactt tttcagaggt gaagatccac agttttacatc aaattctcaa
 4560
 agatgctccc agaatggtag aaaccaggct gtgcataaaa attaacctgc ctggctgggc
 4620
 gcggtgactc acacctgtaa tctcagcact ttgagaggcc aaggcagggtg ggtggatcac
 4680
 ttgaggtcag gagttcgagg ccagcctggc caacatggca aaactccgctc tgtactaaaa
 4740
 atacaagaaa aacttagcca gccatggtgg tgcgtgcctg ttatcccaac tacctggaag
 4800
 gctgaggcag aagaatcgct tgaactgggg aggagaaggt tgcagtgagc cgagatcatg
 4860
 ccactgcact ccagcctgga caacagagca agactccttc tcaaaaaaac tctggctggg
 4920
 tgtgtgtggg tggggactag ggggatgcct gaatgagaat ccctgaatcc ttgagtgtgg
 4980
 gggttcagga atatgtatct aacaagctcc ttggattagt caagtttgtg tgggggctca
 5040
 ggaatatatg tatctagcaa gtcctcaga ctagtcaact ttcttaatag tctgcatatt
 5100
 tgttatattgc ccagaaaggg acactttttg gaatatactt tctttttttt aacttatttc
 5160
 gcattatatt gtttacttaa taactccaag caaataaatg tacatcttta tc
 5212

<210> 4894

<211> 399

<212> PRT

<213> Homo sapiens

<400> 4894

Met	Asp	Met	Phe	Ser	Leu	Asp	Met	Ile	Ile	Ser	Asp	Pro	Ala	Ala	Glu
1				5				10					15		
Ala	Ser	Arg	Ala	Gly	Lys	Lys	Gln	Leu	Arg	Gly	Val	Gln	Asn	Pro	Cys
			20					25					30		
Pro	Ser	Ala	Arg	Ala	Arg	Pro	Arg	His	Lys	Ser	Leu	Asn	Ile	Lys	Asp
		35					40					45			
Lys	Ile	Ser	Glu	Trp	Glu	Gly	Lys	Lys	Glu	Val	Pro	Thr	Pro	Ala	Pro
	50					55				60					
Ser	Arg	Arg	Ala	Asp	Gly	Gln	Glu	Asp	Tyr	Leu	Pro	Ser	Ser	Thr	Val
65				70				75						80	
Glu	Arg	Arg	Ser	Ser	Asp	Gly	Val	Arg	Thr	Gln	Val	Thr	Glu	Ala	Lys
			85					90					95		
Asn	Gly	Met	Arg	Pro	Gly	Thr	Glu	Ser	Thr	Glu	Lys	Glu	Arg	Asn	Lys
		100					105					110			
Gly	Ala	Val	Asn	Val	Gly	Gly	Gln	Asp	Pro	Glu	Pro	Gly	Gln	Asp	Leu

115 120 125
 Ser Gln Pro Glu Arg Glu Val Asp Pro Ser Trp Gly Arg Gly Arg Glu
 130 135 140
 Pro Arg Leu Gly Lys Leu Arg Phe Gln Asn Asp His Leu Ser Val Leu
 145 150 155 160
 Lys Gln Val Lys Lys Leu Glu Gln Ala Leu Lys Asp Gly Ser Ala Gly
 165 170 175
 Leu Asp Pro Gln Leu Pro Gly Thr Cys Tyr Ser Pro His Cys Pro Pro
 180 185 190
 Asp Lys Ala Glu Ala Gly Ser Thr Leu Pro Glu Asn Leu Gly Gly Gly
 195 200 205
 Ser Gly Ser Glu Val Ser Gln Arg Val His Pro Ser Asp Leu Glu Gly
 210 215 220
 Arg Glu Pro Thr Pro Glu Leu Val Glu Asp Arg Lys Gly Ser Cys Arg
 225 230 235 240
 Arg Pro Trp Asp Arg Ser Leu Glu Asn Val Tyr Arg Gly Ser Glu Gly
 245 250 255
 Ser Pro Thr Lys Pro Phe Ile Asn Pro Leu Pro Lys Pro Arg Arg Thr
 260 265 270
 Phe Lys His Ala Gly Glu Gly Asp Lys Asp Gly Lys Pro Gly Ile Gly
 275 280 285
 Phe Arg Lys Glu Lys Arg Asn Leu Pro Pro Leu Pro Ser Leu Pro Pro
 290 295 300
 Pro Pro Leu Pro Ser Ser Pro Pro Pro Ser Ser Val Asn Arg Arg Leu
 305 310 315 320
 Trp Thr Gly Arg Gln Lys Ser Ser Ala Asp His Arg Lys Ser Tyr Glu
 325 330 335
 Phe Glu Asp Leu Leu Gln Ser Ser Ser Glu Ser Ser Arg Val Asp Trp
 340 345 350
 Tyr Ala Gln Thr Lys Leu Gly Leu Thr Arg Thr Leu Ser Glu Glu Asn
 355 360 365
 Val Tyr Glu Asp Ile Leu Asp Pro Pro Met Lys Glu Asn Pro Tyr Glu
 370 375 380
 Asp Ile Glu Leu His Gly Arg Cys Leu Gly Lys Lys Xaa Val Ser
 385 390 395

<210> 4895

<211> 1087

<212> DNA

<213> Homo sapiens

<400> 4895

gcggaatgtc aactattcaa catggaggcg gaggtcgata agctggaact gatgttccag
 60
 aaagctgagt ctgatctgga ttacattcaa tacaggctgg aatatgaaat caagactaat
 120
 catcctgatt cagcaagtga gaaaaatcca gttacactct taaaggaatt gtcagtgata
 180
 aagtctcgat atcaaacttt gtatgccgcg tttaaaccag ttgctgttga gcagaaagag
 240
 agtaagagcc gcatttgtgc tactgtgaaa aagactatga atatgataca aaaactacag
 300
 aagcaaacag acctggagggt aatgctttca gttgacagct gtcaccactg actaagaag
 360

agaaaactgc ggcagagcaa ttcaaatttc acatgccaga tttatgaaga aatggacttg
 420
 gaaaggaaat tctaacagag aagagcttaa ttccggagaa atttaggaag atgtcttgtt
 480
 aacccttgat gtctagagat tgggggctgg tgaagggggt ttggcttcaa tgactggata
 540
 atgatattctt tcatgagaga gattataaga agaagggcag ataatatatg aataaagttc
 600
 agccaaaagg atcaaagtag aataaaacga tttaaataata tgtacacacg catgcacaca
 660
 cacacttagt cttgtaattt caggccagaa attctcaaca ctattttgca tctgttttct
 720
 ttttctaagt catgataata tagatgttct ggtctatcat aaaagaatgt ttatgtacat
 780
 ttcagtcatt cggtagtggt ctttgtaaata taaagtatag gcaaaacatt tgtgttatac
 840
 atgatataata atttcatttt gtaaagtgtt attgcacatg tggtcacatt attgttgaga
 900
 ctgcttttat gtgacctgta gtctcccaca gaacctaaag taataagctg gcttttctgt
 960
 gatagccacg tttgcgtatt tctttcccta tttcccttgc ctgctaattg tgaacagcat
 1020
 gaacttgctt tctgatgctg ttttagactg tccctgttgt atctcaataa tatctttgtt
 1080
 ttccttc
 1087

<210> 4896

<211> 109

<212> PRT

<213> Homo sapiens

<400> 4896

Met	Glu	Ala	Glu	Val	Asp	Lys	Leu	Glu	Leu	Met	Phe	Gln	Lys	Ala	Glu
1				5				10					15		
Ser	Asp	Leu	Asp	Tyr	Ile	Gln	Tyr	Arg	Leu	Glu	Tyr	Glu	Ile	Lys	Thr
		20					25					30			
Asn	His	Pro	Asp	Ser	Ala	Ser	Glu	Lys	Asn	Pro	Val	Thr	Leu	Leu	Lys
		35				40					45				
Glu	Leu	Ser	Val	Ile	Lys	Ser	Arg	Tyr	Gln	Thr	Leu	Tyr	Ala	Arg	Phe
	50				55				60						
Lys	Pro	Val	Ala	Val	Glu	Gln	Lys	Glu	Ser	Lys	Ser	Arg	Ile	Cys	Ala
65				70				75					80		
Thr	Val	Lys	Lys	Thr	Met	Asn	Met	Ile	Gln	Lys	Leu	Gln	Lys	Gln	Thr
		85				90						95			
Asp	Leu	Glu	Val	Met	Leu	Ser	Val	Asp	Ser	Cys	His	His			
		100				105									

<210> 4897

<211> 1733

<212> DNA

<213> Homo sapiens

<400> 4897

nactttgttg cccgggctgg agtgcagtgg cgcgatctca gctcactgca gcctctgcct
60
ctcaggttca agcaattctc ctgcttcagc ctcccaagta gctgggatta caggcgccca
120
ccaacgatcc cagctaattt ttgtattttc agtaaagaca gggtttcacc atgttggtta
180
ggctggcttc aaactcctga tnccacccgc ctgggctcc caaagtgtg ggattacagg
240
cgtgaaccac cgcgcccggg tgacctttgg aacttctgac cgactggctt caagttgagg
300
ttcccacaat tccctctgta ggttcaattt gctggagtgg ctcacaaaac taagggaat
360
acatttactg gtttattata aaggatatta taaaagatac agataaagag atgcataggg
420
tgaggtatga aggaagggca tggagcttcc tgtgccctcc ctgggcgac cacccttcta
480
gaacctctgt atgttcagtt atctggaagc tctctgaatc cagtccccctt ggtttttatg
540
gaagcttcat gacagcagca ttccttctag caggatatgg ggtgggaccg tctctggaat
600
gagttttatg acccaccatc agaaaggtag ggaagattag agtcctgtct tgggcaggta
660
aaaggaaggg caggagggtta gagtgattgt ctctgagggc ctgacacacc caatgttgta
720
acaaaagagt gtaacaaggg ctgtgggagt tatgagccag gaactgtgga cgaaaatgaa
780
tgcggtgtgtt tgtatatatg tgtgtctgtg tatttatata tatatgtgtg tatatacaaa
840
tacacacaca cacacgccac cacaaagcca aaaaagaaga agtgatcatt tttctaagtg
900
ctacgatgga tgccttgga gagcgagcca gagggggcat gtttatgggc tgagctgcac
960
ccccccacc ccaatttatg tgttgaacct ctaatccccg gtagctcgca atggcccgta
1020
tgtgaatgga tatggagata agagagggtga ttacattaag atgaggccgt cagggggccc
1080
ctcatccaat ctaccagtg tccttataag agaaaatctg gacacacaaa gagacaccag
1140
ggacacctgc actcagaaga ccaaccaggg ccatctccaa gccaaggaga gaggccttag
1200
aagaaaccaa ccctgcgaac accttgggtct tggacttcca gcctccagga ctgtgagaaa
1260
ataaatgtct tttgtttaag cactcagtc tctgggtattt tcttatgaga gccagagcag
1320
accaacacag agggtcaggg gaagcgtcta tggggagggtg actcatgtac tgagtcttga
1380
gggagagggt tccaggcaga tggagcagca tgctccaagg ccttgtgaag gaaaagagct
1440
cagtgtgctc cgggaaccag gagaagatga gggaggccag ggcctaagga gggcagggtta
1500
ggagaggaag tgggaagaca tgcaggggac atgtgcacag ggctgggaag gagcctgagt
1560
tttcttctca gtgccatgtg aagccactga agagttttaa tgagaaaagg gacataagtc
1620

agctcctatt ttaggaggtg gcctctggct gtgtctaatag gagttgacaa gaataaaagt
 1680
 agaaggagaa gaccaaggag gaggacgcca ggtgagagca ggtggtggtc agg
 1733

<210> 4898
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 4898
 Xaa Phe Val Ala Arg Ala Gly Val Gln Trp Arg Asp Leu Ser Ser Leu
 1 5 10 15
 Gln Pro Leu Pro Leu Arg Phe Lys Gln Phe Ser Cys Phe Ser Leu Pro
 20 25 30
 Ser Ser Trp Asp Tyr Arg Arg Pro Arg Cys Pro Ala Asn Phe Cys
 35 40 45
 Ile Phe Ser Lys Asp Arg Val Ser Pro Cys Trp Leu Gly Trp Ser Gln
 50 55 60
 Thr Pro Asp Xaa Thr Arg Leu Gly Leu Pro Lys Cys Trp Asp Tyr Arg
 65 70 75 80
 Arg Glu Pro Pro Arg Pro Gly Asp Leu Trp Asn Phe
 85 90

<210> 4899
 <211> 444
 <212> DNA
 <213> Homo sapiens

<400> 4899
 ccggcccatac aaagactggc taaagcatca gccataaatg gggacaaacg tggggccagc
 60
 agcttctgtt cggggctctg gcatcagcaa accgcagcag ctttggagaa ggggccgtga
 120
 gtggcggctc tggaggcagc aacgggggtcc tttgggggtg gtgggagttc tgctggattc
 180
 aggtggaggt gaacatctgc cgttcccaca gccctgcgtg ccccccaaa tgctgctggc
 240
 ccacagaatc agccagtgcc acggccccac cacagccagg cttggccctg tcagcggcca
 300
 gcatcccagag ggccagggtc cgagtgtcct caccaaggag gctcttggcg tcgctgtgcc
 360
 ggctcccatg ggccttctgc tgggtcgagg gtaggtctcc tctctcccct ttgccctggc
 420
 attaaactga tggtcaggct ggga
 444

<210> 4900
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 4900
 Met Gly Thr Asn Val Gly Pro Ala Ala Ser Val Arg Gly Leu Gly Ile

```

<400> 4901
ncgggagtcg cggcgctgcg ggtaggagcc ggggtgcggg agaccccagg ttcggttggg
60
attcccagcc agaacggagc ttaagccggg caggcgatgc gaatgacgga gtagcgagct
120
gcacggcggc gtgctgctgct gttgaggacg ctgtcccgcg cgctcccagg ccgccccgag
180
gcttggggtc ttcgaaggat aatcggcgcc cggggccgaa cagcgggggc acacggggcg
240
ctgccgaagt gcaaggccac ggccagagct cgagcccgac gcgctgtctg gagtcgtagg
300
ttggcgccgt ttggggtcgg ggtctgaggc ttgggcgctg cctggggccga gcggagatcg
360
gggtttgcct cccgtccccg ctcaggaccc tgacgtggct gaagcggccc cgggagcatg
420
agcgggcagc gcgtggacgt caaggtggtg atgctgggca aggagtacgt gggcaagact
480
agcctgggtg agcgctacgt gcacgaccgc tttctgggtg ggcccttatca gaacaccatc
540
ggggccgcct tcgtggccaa ggtgatgtcg gtcggagacc ggactgtgac attaggtatt
600
tgggacacag caggctctga gcgctatgag gccatgagta gaatctacta tcggggtgcc
660
aaggctgcca tcgtctgcta tgacctcaca gacagcagca gctttgagcg agcaaagttc
720
tggtggaagg aactgcgcag cctagaggag ggctgccaaa tctacttatg tggcaccaag
780
agtgacctgc tggaagaaga ccggaggcgt cgacgtgtgg acttccacga cgtccaggac
840
tatgcagaca gtagctgctc ctcagccctt tgggggggtg ggggtgtgtg ctgtctgggt
900
ggatcaaaga aaatagggac tgccttggtt gccagggcaa ggtgctctag gaggtcttcc
960

```


tggcctcctt gaactgtggg gtccaggaga ctccctgaac tgctagccct cccctttgtc
 1020
 tgtttatcta attctcaggt atgaggcttt agtcacttct ctttacagat atcaaagctc
 1080
 agctctttga aacatccagc aagacaggcc agagtgtggg tgagtgtgtg gctggagcct
 1140
 cacagcagga acatgcaggg gcaccagagg aagctgaata gggcacagag ggctgggtca
 1200
 ctgggagatc ccagggttac tggcattggg ccctcgtga tcatcatttt tctgccaga
 1260
 cgagctcttc cagaaagtgg cagaggatta cgtcagtgtg gctgccttcc aggtgatgac
 1320
 agaggacaag ggcgtggatc tgggccagaa gccaaacccc tacttctaca gctgttgtca
 1380
 tctagtgtc agcactcacc tggcctgggg gaattaaagg aattccccgt aagcgtggac
 1440
 ccagctcctt tctgggcttg ggtagtcaaa tgtctgagct acgccaggtc ctcagtgcag
 1500
 cagagtggcg cctgcctgtc
 1520

<210> 4902

<211> 184

<212> PRT

<213> Homo sapiens

<400> 4902

Met Ser Gly Gln Arg Val Asp Val Lys Val Val Met Leu Gly Lys Glu
 1 5 10 15
 Tyr Val Gly Lys Thr Ser Leu Val Glu Arg Tyr Val His Asp Arg Phe
 20 25 30
 Leu Val Gly Pro Tyr Gln Asn Thr Ile Gly Ala Ala Phe Val Ala Lys
 35 40 45
 Val Met Ser Val Gly Asp Arg Thr Val Thr Leu Gly Ile Trp Asp Thr
 50 55 60
 Ala Gly Ser Glu Arg Tyr Glu Ala Met Ser Arg Ile Tyr Tyr Arg Gly
 65 70 75 80
 Ala Lys Ala Ala Ile Val Cys Tyr Asp Leu Thr Asp Ser Ser Ser Phe
 85 90 95
 Glu Arg Ala Lys Phe Trp Val Lys Glu Leu Arg Ser Leu Glu Glu Gly
 100 105 110
 Cys Gln Ile Tyr Leu Cys Gly Thr Lys Ser Asp Leu Leu Glu Glu Asp
 115 120 125
 Arg Arg Arg Arg Arg Val Asp Phe His Asp Val Gln Asp Tyr Ala Asp
 130 135 140
 Ser Ser Cys Ser Ser Ala Leu Trp Gly Val Gly Val Cys Gly Cys Leu
 145 150 155 160
 Gly Gly Ser Lys Lys Ile Gly Thr Ala Leu Ala Ala Arg Ala Arg Cys
 165 170 175
 Ser Arg Arg Ser Ser Trp Pro Pro
 180

<210> 4903

<211> 1064

<212> DNA

<213> Homo sapiens

<400> 4903

agccagtgtc ccaggcggtc tcacgccgca acaattcctg agtagggcct tgcttgagtt
 60
 ctteggaaag tctcatccac ccccatatcg cctctttagg aagtcactta atgttgggct
 120
 tcattattcc cacatccctt tccttactac ttgcctgcac ttcttgagaa aaagactgca
 180
 gaaaggagag gtggggcctt cagtagaaac aagcaaaccg cagtccctgt ggggggactc
 240
 tccaggaaga aggttccgca agaaccgtgg gcgacagtta tggagaagcg tctgcaggag
 300
 gctcagctgt acaaggagga agggaaccag cgctaccggg aagggaagta ccgagatgct
 360
 gtgagtaggt accatcgagc tctgcttcag ctgcgggggc tggatccgna gtctgccctc
 420
 tccgttacct aatctcggac ctcagggccc nggccctcac gcctgnaaca agaaaacata
 480
 ttgcatacca cccagacaga ctgctataac aatctagctg cttgtctcct tcagatggag
 540
 cccgtgaact acgaacgagt gagagaatat agtcagaaag tcctggaacg acagcctgat
 600
 aatgccaaag ccttgtatcg ggccggagtg gcctttttcc atctgcagga ctatgaccag
 660
 gcccgcact acctcctggc tgccgtgaat aggcagccta aagatgccaa cgtccggcgg
 720
 tacctccagc tgacacagtc agaactcagc agctaccata gaaaagagaa gcagctctac
 780
 ctgggcatgt ttggtaaca aagaagaaag atgctcctcc agttgaactt aggtggacca
 840
 ttaaaccatgc atgaaggaga aatctgagcc tcagcaagag aaattaaccc tatacctctg
 900
 acccaggtgg atttttggtt ctagttctgc acaaacttca ctacttagac agtctgagtc
 960
 tttttctgtc tatccatctg tttatttcta tacctttcaa tacatgttat tgttgagat
 1020
 atttggcttg agaaatataa tcagaaaaca taaaaaaaaa aaaa
 1064

<210> 4904

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4904

Cys	Trp	Ala	Ser	Leu	Phe	Pro	His	Pro	Phe	Pro	Tyr	Tyr	Leu	Pro	Ala
1				5				10					15		
Leu	Leu	Glu	Lys	Lys	Thr	Ala	Glu	Arg	Arg	Gly	Gly	Ala	Phe	Ser	Arg
			20					25					30		
Asn	Lys	Gln	Thr	Ala	Val	Pro	Val	Gly	Gly	Leu	Ser	Arg	Lys	Lys	Val
		35					40				45				
Pro	Gln	Glu	Pro	Trp	Ala	Thr	Val	Met	Glu	Lys	Arg	Leu	Gln	Glu	Ala

50		55		60	
Gln	Leu	Tyr	Lys	Glu	Glu
65		70		75	80
Arg	Asp	Ala	Val	Ser	Arg
		85		90	95
Leu	Asp	Pro	Xaa	Ser	Ala
		100		105	

<210> 4905
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 4905
 cccggcagcc acgtggcgga tgggtgttccg cgacaggctc agatgcagca ggcctgtcat
 60
 gttggccagg tcgcggcggc gcacggaggc gatgaagttg tctgccagcc gcagctcggc
 120
 tgcccgggcg tccagcgagg gtggcacgaa caggaggcct gccctgggc acagcacgct
 180
 taggggcagc gactgtgtct ggcagcggca gcggcgggga catgggctgg gtgtgccgag
 240
 acactggagg acctcgacct ctctacaac aacctcgagc agctgccctg ggaggccctg
 300
 ggccgcctgg gcaacgtcaa cacgttgggc ctcgaccaca acctgctggc ttctgtgccc
 360
 gccggcgctt tttcccgctt gcacaagctg gcccggtgg acatgacctc caaccgcctg
 420
 accacaatcc caccgcagcc actcttctcc cgctgcccc tgctcgccag gccccggggc
 480
 tcgcccgcct ctgccctggt gctggccttt ggcggaacc ccctgcactg caactgcgag
 540
 ctggtgtggc tgcgtgcctt ggcgcgggag gacgacctc aggcctgcgc gtccccacct
 600
 gctctgggcg gccgc
 615

<210> 4906
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 4906
 Gly Gln Arg Leu Cys Leu Ala Ala Ala Ala Gly Thr Trp Ala Gly
 1 5 10 15
 Cys Ala Glu Thr Leu Glu Asp Leu Asp Leu Ser Tyr Asn Asn Leu Glu
 20 25 30
 Gln Leu Pro Trp Glu Ala Leu Gly Arg Leu Gly Asn Val Asn Thr Leu
 35 40 45
 Gly Leu Asp His Asn Leu Leu Ala Ser Val Pro Ala Gly Ala Phe Ser
 50 55 60
 Arg Leu His Lys Leu Ala Arg Leu Asp Met Thr Ser Asn Arg Leu Thr
 65 70 75 80
 Thr Ile Pro Pro Asp Pro Leu Phe Ser Arg Leu Pro Leu Leu Ala Arg

```
<210> 4907
<211> 1748
<212> DNA
<213> Homo sapiens
```

4080

ggagatccgc cagttccagc ccagacagaa agtccatata ctccgtctct tcccccgga
 1260
 ggctggcgat cgcctcctcc tccatctcct cgggggaggg cgcgcgcacg gccacgccgc
 1320
 cgcggctccc cctccnccgc ttccaactct ccttcgtcgc caaactgctg cttgcggccg
 1380
 ggagatccgg ccgcgcgcgt ctctcctcc cccgctgcag cccgggtcag gtcagagggc
 1440
 agcgaacaag ttgcagccgg ctccgggctc tctactgcggg ttggggagtt gctgcccag
 1500
 gctgccagca gcttggtcag gctatgcctc atgagggcca cgggcggccg cggtagcccc
 1560
 ggccgctaag agtgggtcac gggccccaag gatcccaggc cccagggcgg gtagcccccg
 1620
 gcactggccg aaacgaaatg cagggaagg tccgagtcgc ctccgcctc acttggttag
 1680
 tcgcacccaa ggcgcgggga gggacgggag aacgaagcgg tgaggccctg cgatgactcg
 1740
 accgcgcc
 1748

<210> 4908

<211> 55

<212> PRT

<213> Homo sapiens

<400> 4908

Glu	Lys	Thr	Thr	Pro	Ser	Gly	Arg	Thr	Pro	Ser	Arg	Thr	Pro	Pro	Thr
1				5				10					15		
Pro	Tyr	Pro	Cys	Pro	His	Gly	Asp	Arg	Leu	Leu	Pro	Pro	Ser	Arg	Pro
			20					25					30		
Leu	Pro	Ala	Gly	Pro	Ala	Ser	Ala	Phe	Pro	Pro	Ala	Glu	Arg	Ser	Arg
			35				40					45			
Gly	His	Arg	Arg	Ala	Ser	Leu									
	50					55									

<210> 4909

<211> 1960

<212> DNA

<213> Homo sapiens

<400> 4909

nacgcgtcct gcggtcagga cagtgttcta agtgtgaagg gtccctgggc agaggctggg
 60
 aggggtggcca gagaccaggg agggccctc catctggtgg gtttggcagg tgtgtccccg
 120
 cgcggctccc cgaaccggaa gtggaggtga gctgtcgcgg gcggcgcccg gccttgcctc
 180
 acgccagca gtccccaccg tcgctgccgc cgccaccgcc ctggccgct gccagggcct
 240
 cctgcagcca tcatgtccgc cagcgccgtc tacgtgctgg acctgaaggg caagggtgctc
 300
 atctgccgga actaccgtgg cgacgtggac atgtcagagg tggagcactt catgcccac
 360

ctgatggaga aggaggagga ggggatgctg tgccccatcc tggcccaagg ggggggtccgt
420
ttcatgtgga tcaaacacaa caacctgtat ctgggtgcca catccaagaa gaacgcgtgc
480
gtgtcgctgg tcttttcttt cctctataag gtggtgcagg tgttttccga gtacttcaag
540
gagctggagg aggagagcat ccgggacaac tttgttatca tctacgagct gctggacgag
600
ctcatggact tcggcttccc ccagaccacc gacagcaaga tcctgcagga gtacatcact
660
cagcagagca acaagctgga gacgggcaag tcacgggtgc caccactgt caccaacgct
720
gtgtcctggc gtcgcgagg tatcaagtat aagaagaacg aggtcttcat tgatgtcata
780
gagtctgtca acctgctggt caatgccaac ggcagcgctc ttctgagcga aatcgctcgg
840
accatcaaga tgcgagtctt cctctcgggc atgcccagac tgcgcctggg cctcaacgac
900
aaggtcctct ttgacaacac gggccgcggc aaaagcaa at ccgtggagct ggaggatgtg
960
aagttccacc agtgtgtgct gctatcacgc ttcgagaatg accgcacat ctccttcac
1020
ccacccgacg gcgagttcga gctcatgtcc taccgtctca acacccacgt caagccttg
1080
atatggatcg agtctgtcat tgagaagttc tcccacagcc gcatcgagta catggtcaag
1140
gccaaggggc agtttaagaa acagtcagt gccaacgggtg tggagatata tgtgcctgta
1200
cccagcgatg ccgactcccc cagattcaag accagtgtgg gcagcgccaa gtatgtgccg
1260
gagagaaaacg tcgtgatttg gagtattaag tctttcccg ggggcaagga gtacttgatg
1320
cgagccact ttggcctccc cagtgtggaa aaggaagagg tggagggccg gcccccatc
1380
gggtcaagt ttgagatccc ctacttcacc gtctctggga tccaggtccg atacatgaag
1440
atcattgaga aaagtggta ccaggccctg ccctgggttc gctacatcac ccagagtggc
1500
gattaccaac ttcgtaccag ctagaaggga gaagagatgg gggcttgaac acggggcttc
1560
cttacagccc cggatgcaga ttttagaggg agggcaggtg cgggctgtgt gtgtctgtgt
1620
gagggcaggc cctggacttg gcagtttctt gctcccagca cccgcccctt cctcacctct
1680
tccttattcc ataggctggg agagaaactc tctctgcttc cctcgccctt ggagctttcc
1740
ccatccccct gatatttatat gaagaaatag aagaggggct tgaagtcccc ctcgcgagtg
1800
ccttcttgca attacctgcc ttagcgggtg ttgcgggtcc ctccttcaca gccgctgagc
1860
ccagaggtcc cgctggcccc tcctctgaat ttaggatgt cattaaaaag atgaatctaa
1920
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1960

<210> 4910

<211> 423

<212> PRT

<213> Homo sapiens

<400> 4910

```

Met Ser Ala Ser Ala Val Tyr Val Leu Asp Leu Lys Gly Lys Val Leu
 1           5           10           15
Ile Cys Arg Asn Tyr Arg Gly Asp Val Asp Met Ser Glu Val Glu His
 20           25           30
Phe Met Pro Ile Leu Met Glu Lys Glu Glu Glu Gly Met Leu Ser Pro
 35           40           45
Ile Leu Ala His Gly Gly Val Arg Phe Met Trp Ile Lys His Asn Asn
 50           55           60
Leu Tyr Leu Val Ala Thr Ser Lys Lys Asn Ala Cys Val Ser Leu Val
 65           70           75           80
Phe Ser Phe Leu Tyr Lys Val Val Gln Val Phe Ser Glu Tyr Phe Lys
 85           90           95
Glu Leu Glu Glu Glu Ser Ile Arg Asp Asn Phe Val Ile Ile Tyr Glu
100           105           110
Leu Leu Asp Glu Leu Met Asp Phe Gly Phe Pro Gln Thr Thr Asp Ser
115           120           125
Lys Ile Leu Gln Glu Tyr Ile Thr Gln Gln Ser Asn Lys Leu Glu Thr
130           135           140
Gly Lys Ser Arg Val Pro Thr Val Thr Asn Ala Val Ser Trp Arg
145           150           155           160
Ser Glu Gly Ile Lys Tyr Lys Lys Asn Glu Val Phe Ile Asp Val Ile
165           170           175
Glu Ser Val Asn Leu Leu Val Asn Ala Asn Gly Ser Val Leu Leu Ser
180           185           190
Glu Ile Val Gly Thr Ile Lys Met Arg Val Phe Leu Ser Gly Met Pro
195           200           205
Glu Leu Arg Leu Gly Leu Asn Asp Lys Val Leu Phe Asp Asn Thr Gly
210           215           220
Arg Gly Lys Ser Lys Ser Val Glu Leu Glu Asp Val Lys Phe His Gln
225           230           235           240
Cys Val Arg Leu Ser Arg Phe Glu Asn Asp Arg Thr Ile Ser Phe Ile
245           250           255
Pro Pro Asp Gly Glu Phe Glu Leu Met Ser Tyr Arg Leu Asn Thr His
260           265           270
Val Lys Pro Leu Ile Trp Ile Glu Ser Val Ile Glu Lys Phe Ser His
275           280           285
Ser Arg Ile Glu Tyr Met Val Lys Ala Lys Gly Gln Phe Lys Lys Gln
290           295           300
Ser Val Ala Asn Gly Val Glu Ile Ser Val Pro Val Pro Ser Asp Ala
305           310           315           320
Asp Ser Pro Arg Phe Lys Thr Ser Val Gly Ser Ala Lys Tyr Val Pro
325           330           335
Glu Arg Asn Val Val Ile Trp Ser Ile Lys Ser Phe Pro Gly Gly Lys
340           345           350
Glu Tyr Leu Met Arg Ala His Phe Gly Leu Pro Ser Val Glu Lys Glu
355           360           365
Glu Val Glu Gly Arg Pro Pro Ile Gly Val Lys Phe Glu Ile Pro Tyr

```

370		375		380	
Phe Thr Val Ser Gly Ile Gln Val Arg Tyr Met Lys Ile Ile Glu Lys					
385		390		395	400
Ser Gly Tyr Gln Ala Leu Pro Trp Val Arg Tyr Ile Thr Gln Ser Gly					
	405		410		415
Asp Tyr Gln Leu Arg Thr Ser					
420					

<210> 4911

<211> 1862

<212> DNA

<213> Homo sapiens

<400> 4911

tataagaaat aattgtgaca tttcatgcct ggaaatgtat cacgggggct ttcgttcata
60
ttgacactat atattactga atggatcagt taatatataa ccagttttaa ggacctgaaa
120
atgtagtgac agccaagaag gatattttga agtttgaaat gatccctata taaatagaac
180
ggatcagcat aactttggga taaaattagc cgacagtttg tggactctcc agcatgcgcc
240
tgtttgctcg gtgctgttct ctcgataaat cacaacaaag cttccagagg gagagggaagg
300
atggacggca ccactgcccc tgtcactaaa tctggagctg ccaagttagt taagagaaat
360
ttccttgagg cgctaaagtc caatgacttc ggaaaattga aggetatttt gatccaaagg
420
caaatagatg tggacactgt ttttgaagtc gaagatgaga atatggtttt ggcattctat
480
aaacaagggt actggttgcc tagctataaa ttgaagtctt cctggggccac aggcctccat
540
ctctctgtct tgtttggcca tgtggaatgt cttctggtgc tactggacca caatgctaca
600
atcaactgta gaccaatgg gaaaaccct cttcacgtgg cttgtgaaat ggccaatgtg
660
gattgtgtta agatcctctg tgatcgtggg gcaaagctca attgctactc cttaaagtga
720
cacacagctt tgcacttttg tacaactcca agttccattc tctgtgcaa gcaattgggt
780
tggagagtga cacaagtcaa ccacatgtta ggaaattccc tggatcaatga agtggaaat
840
gtgacacaag tcaaccacat gttaggaaat tccctgggtca atgaagtga acatggggcg
900
aatgtgaaca tgaagacaa caaccaagat gaggagacgc ccttgacacac ggctgcccac
960
ttcggccttt cggagctggg ggccttctac gtggaacacg gggccatagt ggacagcgtg
1020
aatgcccaca tggagacccc cctggccatc gccgcctact gggccctccg ctttaaggag
1080
caggagtaca gcacggagca ccacctgggc tgccgcatgc tgcttgacta caaagccgaa
1140
gtcaatgccc gagatgacga ctttaaactc cccctccaca aggcagcctg gaactgtgac
1200

cacgtgctca tgcacatgat gctggaagct ggcgccgaag ccaatctcat ggatatcaac
 1260
 ggctgtgctg ccatccagta cgtgctgaag gtcacctccg tgcgccctgc tgcccagcct
 1320
 gagatctgct accagctcct gttgaacctat ggggctgccc gaatataccc tccacagtgc
 1380
 cataaggtga tacaggcctg ccattcttgt cctaaagcaa ttgaagttgt agtcaatgcc
 1440
 tatgaacaca tcagatggaa cacaaagtgg agaagagcta tccccgatga tgacttggag
 1500
 gtaaataatc gattcccttc taatagtttt cactatcaag tacttccaga ctgctctaga
 1560
 agtacagaaa attgtaacaa aaaagttggg ttgagaatg cctttaaaagc gtactcaaat
 1620
 gcaatgagac aaaggggttat aaaatgcagg tttgagagtt aatatttcca tcaaatatgt
 1680
 ggcattaagg agtgtcttgg ggaattcctc catttaaggg caagttgaat taagtatata
 1740
 aaggtggcag ttttcctttc ttctcattaa tttagatgag ttaaatgata acatttggaa
 1800
 ttgcttatat agcattttta ccagaatatt aaagcgtttt gtgtagatta tttcatttac
 1860
 tt
 1862

<210> 4912

<211> 453

<212> PRT

<213> Homo sapiens

<400> 4912

Met	Asp	Gly	Thr	Thr	Ala	Pro	Val	Thr	Lys	Ser	Gly	Ala	Ala	Lys	Leu
1				5					10					15	
Val	Lys	Arg	Asn	Phe	Leu	Glu	Ala	Leu	Lys	Ser	Asn	Asp	Phe	Gly	Lys
		20						25				30			
Leu	Lys	Ala	Ile	Leu	Ile	Gln	Arg	Gln	Ile	Asp	Val	Asp	Thr	Val	Phe
	35					40					45				
Glu	Val	Glu	Asp	Glu	Asn	Met	Val	Leu	Ala	Ser	Tyr	Lys	Gln	Gly	Tyr
	50				55					60					
Trp	Leu	Pro	Ser	Tyr	Lys	Leu	Lys	Ser	Ser	Trp	Ala	Thr	Gly	Leu	His
65				70					75					80	
Leu	Ser	Val	Leu	Phe	Gly	His	Val	Glu	Cys	Leu	Leu	Val	Leu	Leu	Asp
			85					90					95		
His	Asn	Ala	Thr	Ile	Asn	Cys	Arg	Pro	Asn	Gly	Lys	Thr	Pro	Leu	His
		100						105					110		
Val	Ala	Cys	Glu	Met	Ala	Asn	Val	Asp	Cys	Val	Lys	Ile	Leu	Cys	Asp
	115					120					125				
Arg	Gly	Ala	Lys	Leu	Asn	Cys	Tyr	Ser	Leu	Ser	Gly	His	Thr	Ala	Leu
	130				135					140					
His	Phe	Cys	Thr	Thr	Pro	Ser	Ser	Ile	Leu	Cys	Ala	Lys	Gln	Leu	Val
145				150				155						160	
Trp	Arg	Val	Thr	Gln	Val	Asn	His	Met	Leu	Gly	Asn	Ser	Leu	Val	Asn
			165			170							175		
Glu	Val	Glu	His	Val	Thr	Gln	Val	Asn	His	Met	Leu	Gly	Asn	Ser	Leu

180 185 190
 Val Asn Glu Val Glu His Gly Ala Asn Val Asn Met Lys Thr Asn Asn
 195 200 205
 Gln Asp Glu Glu Thr Pro Leu His Thr Ala Ala His Phe Gly Leu Ser
 210 215 220
 Glu Leu Val Ala Phe Tyr Val Glu His Gly Ala Ile Val Asp Ser Val
 225 230 235 240
 Asn Ala His Met Glu Thr Pro Leu Ala Ile Ala Ala Tyr Trp Ala Leu
 245 250 255
 Arg Phe Lys Glu Gln Glu Tyr Ser Thr Glu His His Leu Val Cys Arg
 260 265 270
 Met Leu Leu Asp Tyr Lys Ala Glu Val Asn Ala Arg Asp Asp Asp Phe
 275 280 285
 Lys Ser Pro Leu His Lys Ala Ala Trp Asn Cys Asp His Val Leu Met
 290 295 300
 His Met Met Leu Glu Ala Gly Ala Glu Ala Asn Leu Met Asp Ile Asn
 305 310 315 320
 Gly Cys Ala Ala Ile Gln Tyr Val Leu Lys Val Thr Ser Val Arg Pro
 325 330 335
 Ala Ala Gln Pro Glu Ile Cys Tyr Gln Leu Leu Leu Asn His Gly Ala
 340 345 350
 Ala Arg Ile Tyr Pro Pro Gln Phe His Lys Val Ile Gln Ala Cys His
 355 360 365
 Ser Cys Pro Lys Ala Ile Glu Val Val Val Asn Ala Tyr Glu His Ile
 370 375 380
 Arg Trp Asn Thr Lys Trp Arg Arg Ala Ile Pro Asp Asp Asp Leu Glu
 385 390 395 400
 Val Asn Asn Arg Phe Pro Ser Asn Ser Phe His Tyr Gln Val Leu Pro
 405 410 415
 Asp Cys Ser Arg Ser Thr Glu Asn Cys Asn Lys Lys Val Gly Phe Glu
 420 425 430
 Asn Ala Phe Lys Ala Tyr Ser Asn Ala Met Arg Gln Arg Val Ile Lys
 435 440 445
 Cys Arg Phe Glu Ser
 450

<210> 4913

<211> 2090

<212> DNA

<213> Homo sapiens

<400> 4913

gtgccaatat gcaaaagagg tggcccagat gcaggcccg cccctggagc ggccgaggta
 60
 gggggtgagg cctccgcggg cgccgctggc atcccagcgt tctctgcggg cgcagggggg
 120
 ccgctcttgc ccggcgctggc gactcgctag cgtcagcagc gccgcagccg gacgagaaag
 180
 cggaagatgg cggcgggcggc cgggaggccg tgaggagagc ggcggtgcg agggcgggccg
 240
 atggcgggccg ggaggcgccc tcggacactt gcgggtcggt agggcgcgac gctggggaggc
 300
 atgtcggagc acgtggagcc cgcagctccg gggcccgggc ccaacggcgg cggcgggcggc
 360

ccggcccccg cgcgcggggc tcgcaccccc aatctcaacc ccaacccccct catcaacgtg
420
cgcgaccggc tcttccacgc gctgttcttc aagatggctg tcacctatc gcggctcttc
480
ccgcccgcct tccgccgtct cttcgagttc ttcgtgctgc tcaaggccct gtttgtgctc
540
ttcgtcctgg cctacatcca catcgtcttc tcccgctcgc ccatcaactg cctggagcat
600
gtgcgtgaca agtggccgcg tgagggcatc ctgcgtgtgg aagtgcggca caactcgagc
660
cgcgcgcccc tcttcttaca gttctgtgac agcggcgggc gcgggagctt cccgggcctg
720
gccgtggaac caggcagcaa cctggacatg gaagatgagg aggaggaaga gctgaccatg
780
gagatgtttg ggaacagctc catcaagttt gagctggaca tcgagcccaa ggtgttcaag
840
ccgccgagta gcacagaggc cctgaatgac agccaggagt tccccttccc cgagacgccc
900
accaaagtgt ggccgcagga cgagtacatc gtggagtact cactagagta tggcttcctt
960
cgctgtcgc aggccacccg ccagcgctg agcatccccg tcatggtggt caccctggag
1020
cccacgcggg accagtgctt cggggaccgc ttcagccgcc tgctgctgga tgagtccctg
1080
ggctacgatg acatcctcat gtccagcgtg aagggcctgg ccgagaacga ggagaacaag
1140
ggcttcctgc ggaatgtggt gtcgggcgag cactaccgct ttgtgagcat gtggatggcg
1200
cggacgtcct acctggccgc cttcgccatc atggtcatct tcacgctgag cgtgtccatg
1260
ctgctgcggt actcacacca ccagatcttc gtcttcatcg tggacctgct gcagatgctg
1320
gagatgaaca tggccatcgc cttccccgca gcgcccctgc tgaccgtcat cctggccctc
1380
gtcgggatgg aggccatcat gtcggagttc ttcaacgaca ccaccacgc cttctacatc
1440
atcctcatcg tgtggctcgc ggaccagtat gacgccatct gctgccacac cagcaccagc
1500
aagcggcatt ggctgcggtt cttctatctc taccacttcg ccttctatgc ctatcactac
1560
cgcttcaatg ggcagtatag cagcctggcc ctgggtcacct cctggctctt catccagcat
1620
tccatgatct acttcttcca cactatgag ctgcctgcc tctgcagca ggtccgcac
1680
caggagatgc tgcttcaggc gccgccactg ggccccggga ccccccacggc gctgcccgat
1740
gacatgaaca acaactcggg cgccccggct acagcccctg actctgccgg ccagcccccc
1800
gccctgggccc ccgtgtttga gctggtcagc aaggagaggg ggtgggggttc cgcggaaggt
1860
tctggagggg tcttggtagg tctgcagtga accgtcctga ggatggagtg ggtcccatg
1920
gtgcaggtct ctgagcaagg cggaggtgtg gaggagaggc cggcttgggg tggggcctcg
1980

cgccctagtg ccggccggcc tcagcccggc tctgcctggg getccctgca gtgccttctc
 2040
 catggccccg ccttccccgc gtgtggcgca ggcttggggg ccccgggaga
 2090

<210> 4914

<211> 529

<212> PRT

<213> Homo sapiens

<400> 4914

Met	Ser	Glu	His	Val	Glu	Pro	Ala	Ala	Pro	Gly	Pro	Gly	Pro	Asn	Gly
1				5					10					15	
Gly	Gly	Gly	Gly	Pro	Ala	Pro	Ala	Arg	Gly	Pro	Arg	Thr	Pro	Asn	Leu
				20				25					30		
Asn	Pro	Asn	Pro	Leu	Ile	Asn	Val	Arg	Asp	Arg	Leu	Phe	His	Ala	Leu
		35					40					45			
Phe	Phe	Lys	Met	Ala	Val	Thr	Tyr	Ser	Arg	Leu	Phe	Pro	Pro	Ala	Phe
	50					55					60				
Arg	Arg	Leu	Phe	Glu	Phe	Val	Leu	Leu	Lys	Ala	Leu	Phe	Val	Leu	
65					70				75					80	
Phe	Val	Leu	Ala	Tyr	Ile	His	Ile	Val	Phe	Ser	Arg	Ser	Pro	Ile	Asn
				85					90					95	
Cys	Leu	Glu	His	Val	Arg	Asp	Lys	Trp	Pro	Arg	Glu	Gly	Ile	Leu	Arg
			100					105					110		
Val	Glu	Val	Arg	His	Asn	Ser	Ser	Arg	Ala	Pro	Val	Phe	Leu	Gln	Phe
			115				120					125			
Cys	Asp	Ser	Gly	Gly	Arg	Gly	Ser	Phe	Pro	Gly	Leu	Ala	Val	Glu	Pro
						135					140				
Gly	Ser	Asn	Leu	Asp	Met	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Leu	Thr	Met
145					150				155					160	
Glu	Met	Phe	Gly	Asn	Ser	Ser	Ile	Lys	Phe	Glu	Leu	Asp	Ile	Glu	Pro
				165					170					175	
Lys	Val	Phe	Lys	Pro	Pro	Ser	Ser	Thr	Glu	Ala	Leu	Asn	Asp	Ser	Gln
			180					185					190		
Glu	Phe	Pro	Phe	Pro	Glu	Thr	Pro	Thr	Lys	Val	Trp	Pro	Gln	Asp	Glu
		195					200					205			
Tyr	Ile	Val	Glu	Tyr	Ser	Leu	Glu	Tyr	Gly	Phe	Leu	Arg	Leu	Ser	Gln
	210					215					220				
Ala	Thr	Arg	Gln	Arg	Leu	Ser	Ile	Pro	Val	Met	Val	Val	Thr	Leu	Asp
225					230					235				240	
Pro	Thr	Arg	Asp	Gln	Cys	Phe	Gly	Asp	Arg	Phe	Ser	Arg	Leu	Leu	Leu
				245					250					255	
Asp	Glu	Phe	Leu	Gly	Tyr	Asp	Asp	Ile	Leu	Met	Ser	Ser	Val	Lys	Gly
			260					265					270		
Leu	Ala	Glu	Asn	Glu	Glu	Asn	Lys	Gly	Phe	Leu	Arg	Asn	Val	Val	Ser
			275				280						285		
Gly	Glu	His	Tyr	Arg	Phe	Val	Ser	Met	Trp	Met	Ala	Arg	Thr	Ser	Tyr
	290						295				300				
Leu	Ala	Ala	Phe	Ala	Ile	Met	Val	Ile	Phe	Thr	Leu	Ser	Val	Ser	Met
305					310					315				320	
Leu	Leu	Arg	Tyr	Ser	His	His	Gln	Ile	Phe	Val	Phe	Ile	Val	Asp	Leu
				325					330					335	
Leu	Gln	Met	Leu	Glu	Met	Asn	Met	Ala	Ile	Ala	Phe	Pro	Ala	Ala	Pro

340 345 350
 Leu Leu Thr Val Ile Leu Ala Leu Val Gly Met Glu Ala Ile Met Ser
 355 360 365
 Glu Phe Phe Asn Asp Thr Thr Ala Phe Tyr Ile Ile Leu Ile Val
 370 375 380
 Trp Leu Ala Asp Gln Tyr Asp Ala Ile Cys Cys His Thr Ser Thr Ser
 385 390 395 400
 Lys Arg His Trp Leu Arg Phe Phe Tyr Leu Tyr His Phe Ala Phe Tyr
 405 410 415
 Ala Tyr His Tyr Arg Phe Asn Gly Gln Tyr Ser Ser Leu Ala Leu Val
 420 425 430
 Thr Ser Trp Leu Phe Ile Gln His Ser Met Ile Tyr Phe Phe His His
 435 440 445
 Tyr Glu Leu Pro Ala Ile Leu Gln Gln Val Arg Ile Gln Glu Met Leu
 450 455 460
 Leu Gln Ala Pro Pro Leu Gly Pro Gly Thr Pro Thr Ala Leu Pro Asp
 465 470 475 480
 Asp Met Asn Asn Asn Ser Gly Ala Pro Ala Thr Ala Pro Asp Ser Ala
 485 490 495
 Gly Gln Pro Pro Ala Leu Gly Pro Val Phe Glu Leu Val Ser Lys Glu
 500 505 510
 Arg Gly Trp Gly Ser Ala Glu Gly Ser Gly Gly Val Leu Val Gly Leu
 515 520 525
 Gln

<210> 4915

<211> 1157

<212> DNA

<213> Homo sapiens

<400> 4915

gcacaggaag ctgctttatt cttgctgaga gacaggggct gctgcccaca cacagaccct
 60
 gtgtccaccc tgcagaaaag gccaggaggg cctgcagagc tgggaagcgc cacccaaggg
 120
 tctcagtcac caagactgca ggagaggcaa ggccatgtca ggctggcag ctgtggctgg
 180
 ggccaggagg gagggaccag gcccatgtgg gaacaggaca aatgcccaag gccacatcct
 240
 tcgtccacag tcttgaggct cctgccaggc tgacaggaaa cagcccagag ctgaggtctt
 300
 tgagccggtc attccaacat tgcaagcacc acccagtcct cctggctgaa gttgagttag
 360
 gtaagaaggg cccgtggcca gggacagga gggccctcag gaggctcca gggctgctgc
 420
 tgaggccggg cagcgtccta ggctcaagg acactcctt ctccccgtg cccaagcca
 480
 ccatggcagc agcatcaggg ctgtgccgcc tcaccccat ccctgtctgg gcagatgtga
 540
 aggggtgaccg tctccccac tgtccgaag ttgacggtct ggggtgaaag ctctgtgggtg
 600
 aagctgtctt ggccactgtc cgcagaacgc cggatgcggg tgcagaaaga ctgcgtccag
 660

ggagcactgc ccacaggccg agccggggcc tcccgcaaga ggaaggaggt gccctcaagg
 720
 ctacggacct ggggtcccgg tggtagcgcc ccacggggct caggcctaaa gaggccgaga
 780
 gggcctcggg gaccagtgcc agccccacgc tgagcagcac aggctgcccc accgtgggct
 840
 ccccgatctc tctctggatc accgagacct cgcaggagg gtcacaggg gcgccaggcc
 900
 cagggccacc acagtggaag gtctcccctt cccagggcac gtaatcttcc aggtcagcca
 960
 gtgtcagcat gcggccgttg tgcgtgagga tcttggggtc acgatcccca aggtgtgtg
 1020
 tgtctgggga ctctccgctc acaaagagag tctccgtctt cccctcttc ctagtccgcg
 1080
 ctctccatc gtgccctcct cctccaggct gcccatgcc gaacggagag agaactagtt
 1140
 ctctctctct ctctctc
 1157

<210> 4916

<211> 59

<212> PRT

<213> Homo sapiens

<400> 4916

Met	Arg	Val	Gln	Lys	Asp	Cys	Val	Gln	Gly	Ala	Leu	Pro	Thr	Gly	Arg
1				5					10					15	
Ala	Gly	Ala	Ser	Arg	Lys	Arg	Lys	Glu	Val	Pro	Ser	Arg	Leu	Arg	Thr
			20					25					30		
Trp	Gly	Pro	Gly	Gly	Asp	Ala	Pro	Arg	Gly	Ser	Gly	Leu	Lys	Arg	Pro
		35					40					45			
Arg	Gly	Pro	Arg	Gly	Pro	Ser	Ala	Ala	Pro	Arg					
	50						55								

<210> 4917

<211> 1544

<212> DNA

<213> Homo sapiens

<400> 4917

cgaagcacct cctctctctg actttccgcc ttcccgtgac gaccccggtt ttgccctct
 60
 ccagctccct cagccgcggg cacctgagct ctccgcggcc accagggggc gcccgcgcc
 120
 cagtctgggc gcgagagccg ccaagcgcgc actccgttcc tctggtgcc ccgccccgtc
 180
 cggcgcgggc cccgccccct ccggcgcccc gccccgtccg gcagcggcct cgctccctcc
 240
 gatccccccc gcgccccgga cccctggccc cactgttggg ccagctcgcc gggctcggcc
 300
 atgggccccg ccgctcgccc cgcgtgaga tcgcccgcgc cgcctccgcc gccgcctccg
 360
 tctccgtgac tgctgctgct gccctgctg ccgctgtggc tgggcctggc ggggccccgg
 420

gccgcggcgg acggcagcga gccggcgccc ggggcggggc ggggcggagc ccgcgcctg
 480
 cgggtggacg tgagactgcc gcgccaggac gctctggtcc tggagggcgt caggatcggc
 540
 tccgaagccg acccggcgcc cctgctgggc ggtcgtctgc tgctgatgga tgcctggat
 600
 gctgagcagg aggcacccgc agatggctgg attgcagtgg catatgtggg caaggagcag
 660
 gcggcccagt tccaccagga gaataagggc agtggcccgcc aggcctatcc caaggccctg
 720
 gtccagcaga tgcggcgggc cctcttcctg ggtgcctctg ccctgcttct tctcatcctg
 780
 aaccacaacg tgggccgaga gctggacata tcccagcttc tgctcaggcc agtgatcgtc
 840
 ctccattatt cctccaatgt caccaagctg ttggatgcat tgctgcagag gacccaggcc
 900
 acggctgaga tcaccagcgg agagtccctg tctgccata tcgagtggaa gttgacctg
 960
 tggaccacct gtggcctctc caaggatggc tatggaggat ggcaggactt ggtctgcctt
 1020
 ggaggcagtc gtgccagga gcagaaaccc ctgcagcagc tgtggaacgc catcctgctg
 1080
 gtggccatgc tcctgtgcac aggcctcgtg gtccaggccc agcggcaggc gtcgcggcag
 1140
 agccagcggg agctcggagg ccaggatggc ctgtttaagc gccgcgtggt gcggagactg
 1200
 gcatccctca agacacggcg ctgccggctg agcagggcag cgcagggcct cccagatccg
 1260
 ggtgctgaga cctgtgcggt gtgcctggac tacttctgca acaaacaggc tagtgccccg
 1320
 gtggctccgg gtgctgcctt gtaagcacga gtttcaccga gactgtgtgg acccctggct
 1380
 gatgctccag cagacctgcc cactgtgcaa attcaacgtc ctgggtgagc accaggggtg
 1440
 gggtcctcgt gcctactctg cctgctcctc acctgatgcc tctctccctg ttcttcttcc
 1500
 cctccctcgc aggaaccgc tactccgatg attagctgcc cagc
 1544

<210> 4918

<211> 347

<212> PRT

<213> Homo sapiens

<400> 4918

Met	Gly	Pro	Ala	Ala	Arg	Pro	Ala	Leu	Arg	Ser	Pro	Pro	Pro	Pro	Pro
1				5					10					15	
Pro	Pro	Pro	Pro	Ser	Pro	Leu	Leu	Leu	Leu	Leu	Pro	Leu	Leu	Pro	Leu
				20				25					30		
Trp	Leu	Gly	Leu	Ala	Gly	Pro	Gly	Ala	Ala	Ala	Asp	Gly	Ser	Glu	Pro
		35					40					45			
Ala	Ala	Gly	Ala	Gly	Arg	Gly	Gly	Ala	Arg	Ala	Val	Arg	Val	Asp	Val
		50				55					60				
Arg	Leu	Pro	Arg	Gln	Asp	Ala	Leu	Val	Leu	Glu	Gly	Val	Arg	Ile	Gly

```

65          70          75          80
Ser Glu Ala Asp Pro Ala Pro Leu Leu Gly Gly Arg Leu Leu Leu Met
          85          90          95
Asp Val Val Asp Ala Glu Gln Glu Ala Pro Ala Asp Gly Trp Ile Ala
          100          105          110
Val Ala Tyr Val Gly Lys Glu Gln Ala Ala Gln Phe His Gln Glu Asn
          115          120          125
Lys Gly Ser Gly Pro Gln Ala Tyr Pro Lys Ala Leu Val Gln Gln Met
          130          135          140
Arg Arg Ala Leu Phe Leu Gly Ala Ser Ala Leu Leu Leu Ile Leu
145          150          155          160
Asn His Asn Val Val Arg Glu Leu Asp Ile Ser Gln Leu Leu Leu Arg
          165          170          175
Pro Val Ile Val Leu His Tyr Ser Ser Asn Val Thr Lys Leu Leu Asp
          180          185          190
Ala Leu Leu Gln Arg Thr Gln Ala Thr Ala Glu Ile Thr Ser Gly Glu
          195          200          205
Ser Leu Ser Ala Asn Ile Glu Trp Lys Leu Thr Leu Trp Thr Thr Cys
          210          215          220
Gly Leu Ser Lys Asp Gly Tyr Gly Gly Trp Gln Asp Leu Val Cys Leu
225          230          235          240
Gly Gly Ser Arg Ala Gln Glu Gln Lys Pro Leu Gln Gln Leu Trp Asn
          245          250          255
Ala Ile Leu Leu Val Ala Met Leu Leu Cys Thr Gly Leu Val Val Gln
          260          265          270
Ala Gln Arg Gln Ala Ser Arg Gln Ser Gln Arg Glu Leu Gly Gly Gln
          275          280          285
Val Asp Leu Phe Lys Arg Arg Val Val Arg Arg Leu Ala Ser Leu Lys
          290          295          300
Thr Arg Arg Cys Arg Leu Ser Arg Ala Ala Gln Gly Leu Pro Asp Pro
305          310          315          320
Gly Ala Glu Thr Cys Ala Val Cys Leu Asp Tyr Phe Cys Asn Lys Gln
          325          330          335
Ala Ser Ala Pro Val Ala Pro Gly Ala Ala Leu
          340          345

```

<210> 4919

<211> 1362

<212> DNA

<213> Homo sapiens

<400> 4919

```

ncggaggcgg gcacttgagg ggaaagtga gacgtgatta ccgggttggg cgggccccat
60

```

```

ctgggagggg tttgtgggtg aactcggggt ccaccgcccg ctgaggagat ggatgaggac
120

```

```

gggcttctc tcatggggtc aggcataagc ctgaccaagg tgccagctat tcaacagaaa
180

```

```

agaacggtgg cttttctaaa ccaatttgtg gtgcacactg tacagttcct caaccgcttt
240

```

```

tctacagttt gtgaggagaa actggcagac ctttcacttc gtatccaaca aattgaaaca
300

```

```

actctcaata ttttagatgc aaagtgtgca tctatcccag gcctagatga tgtcacagtt
360

```


gaagtatctc ctttaaagt caccagtgtc acaaattggag cacatctga agccacttca
 420
 gagcaaccac agcagaacag tacacaagac tctggactac aggaaagtga agtatcagca
 480
 gaaaatatct taactgtagc caaggatcca agatatgcca gatattctca aatgggttcaa
 540
 gtgggtgtac cagtgatggc aataagaaac aaaatgatat cagaaggact agaccagat
 600
 cttcttgaga ggccagatgc tccagtgcct gatggcgaaa gtgagaaaac tgtagaagaa
 660
 agttcagata gcgaatcttc ttttagtgat taagcttaat tttgataaga attacatatg
 720
 catgcatagg ggtacattta cattctgtaa gagattgagc ctgaactctc ttagtcataa
 780
 aaacatcaaa tggccacatg tccactacca agcttcttct atgttaaaaa aataataata
 840
 aagcagtttt aacctgccca gtatgtcttg ttgctaaaat aanggccctc aaattgaaaa
 900
 ttnggatacc ctaaataaag taccaattag tgctccaaat actaagatag aatatttttag
 960
 agatgcaatg agcaattaca gtcaggcacg gggtgtcacg cctgtaatcc cagcactttg
 1020
 ggaggccgag gcgagtggat aacctgaggt caggagttca agaccagcct ggccaacatg
 1080
 gtgaaacctc catctctact aaaaatacaa aaagtagctg ggcgtggtga caaaaattag
 1140
 ctgggcgtag tggcaggtgc ctgtaatccc agctactcgg gaagctgagg caggagaatc
 1200
 acttgaaccc agaaggtaaa gggtttcagt agctgagatt gcgtcattgc actccagcca
 1260
 tggcgacaag agtgaaactc tgtcttaaaa ataaaaagag atgcaatgag caatttttaa
 1320
 tgaagtcaat gtgagtttag tgatcaatag tagaccaat gc
 1362

<210> 4920

<211> 194

<212> PRT

<213> Homo sapiens

<400> 4920

Met	Asp	Glu	Asp	Gly	Leu	Pro	Leu	Met	Gly	Ser	Gly	Ile	Asp	Leu	Thr
1				5					10					15	
Lys	Val	Pro	Ala	Ile	Gln	Gln	Lys	Arg	Thr	Val	Ala	Phe	Leu	Asn	Gln
			20					25					30		
Phe	Val	Val	His	Thr	Val	Gln	Phe	Leu	Asn	Arg	Phe	Ser	Thr	Val	Cys
			35				40					45			
Glu	Glu	Lys	Leu	Ala	Asp	Leu	Ser	Leu	Arg	Ile	Gln	Gln	Ile	Glu	Thr
			50				55				60				
Thr	Leu	Asn	Ile	Leu	Asp	Ala	Lys	Leu	Ser	Ser	Ile	Pro	Gly	Leu	Asp
65					70					75				80	
Asp	Val	Thr	Val	Glu	Val	Ser	Pro	Leu	Asn	Val	Thr	Ser	Val	Thr	Asn
				85					90					95	
Gly	Ala	His	Pro	Glu	Ala	Thr	Ser	Glu	Gln	Pro	Gln	Gln	Asn	Ser	Thr

```

<400> 4921
nggttggttag cttctatcct gggggctgag cgactgcggg ccagctcttc ccttactccc
60
tctcggctcc ttgtggccca aaggccctaa cgggggtccg gcggtctgtg ccctagggta
120
tcttccccgt tgcccccttg gggcggggatg gctgcggaag aagaagacga ggtggagtgg
180
gtagtggaga gcatcgcggg gctcctgcga ggcccagact ggtccatccc catcttggac
240
tttgtggaac agaaatgtga agtttttgat gatgaagaag aaagcaaatt gacctataca
300
gagattcatc aggaatacaa agaactagtt gaaaagctgt tagaaggtta cctcaaagaa
360
attggaatta atgaagatca atttcaagaa gcatgcactt ctctcttgc aaagacccat
420
acatcacagg ccattttgca acctgtgttg gcagcagaag attttactat ctttaaagca
480
atgatgggtcc agaaaaacat tgaaatgcag ctgcaagcca ttcgaataat tcaagagaga
540
aatggtgtat tacctgactg cttaaccgat ggctctgatg tggctcagtga ccttgaacac
600
gaagagatga aaatcctgag ggaagttctt agaaaatcaa aagaggaata tgaccaggaa
660
gaagaaagga agaggaaaaa acagttatca gaggctaaaa cagaagagcc cacagtgcac
720
tccagtgaag ctgcaataat gaataattcc caaggggatg gtgaacattt tgcacaccca
780
ccctcagaag ttaaaatgca ttttgctaat cagtcaatag aacctttggg aagaaaagtg
840
gaaaggtctg aaacttcctc cctccacaa aaaggcctga agattcctgg cttagagcat
900
gcgagcattg aaggaccaat agcaaactta tcagtacttg gaacagaaga acttcggcaa
960
cgagaacact atctcaagca gaagagagat aagttgatgt ccatgagaaa ggatatgagg
1020

```

actaaacaga tacaaaatat ggagcagaaa ggaaaaccca ctggggaggt agaggaaatg
 1080
 acagagaaac cagaaatgac agcagaggag aagcaaacat tactaaagag gagattgctt
 1140
 gcagagaaac tcaaagaaga agttattaat aagtaataat taagaacaat ttaacaaaat
 1200
 ggaagttcaa attgtcttaa aaataaatta tttagtcctt acactgaaaa aaaaaaaaaa
 1260
 aaaaaataaa aa
 1272

<210> 4922

<211> 342

<212> PRT

<213> Homo sapiens

<400> 4922

Met	Ala	Ala	Glu	Glu	Glu	Asp	Glu	Val	Glu	Trp	Val	Val	Glu	Ser	Ile
1			5						10					15	
Ala	Gly	Leu	Leu	Arg	Gly	Pro	Asp	Trp	Ser	Ile	Pro	Ile	Leu	Asp	Phe
			20					25					30		
Val	Glu	Gln	Lys	Cys	Glu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu
			35				40					45			
Thr	Tyr	Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu
			50			55				60					
Leu	Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe	Gln
65					70					75				80	
Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln	Ala	Ile
				85					90					95	
Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe	Lys	Ala	Met
			100					105					110		
Met	Val	Gln	Lys	Asn	Ile	Glu	Met	Gln	Leu	Gln	Ala	Ile	Arg	Ile	Ile
			115				120					125			
Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	Asp	Gly	Ser	Asp
			130			135					140				
Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	Ile	Leu	Arg	Glu	Val
145					150					155				160	
Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	Glu	Glu	Glu	Arg	Lys	Arg
				165					170					175	
Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	Glu	Glu	Pro	Thr	Val	His	Ser
			180					185					190		
Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	Ser	Gln	Gly	Asp	Gly	Glu	His	Phe
			195				200					205			
Ala	His	Pro	Pro	Ser	Glu	Val	Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile
			210				215					220			
Glu	Pro	Leu	Gly	Arg	Lys	Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro
225					230					235				240	
Gln	Lys	Gly	Leu	Lys	Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly
				245					250					255	
Pro	Ile	Ala	Asn	Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg
			260					265					270		
Glu	His	Tyr	Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys
			275				280						285		
Asp	Met	Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro

```
<210> 4923
<211> 765
<212> DNA
<213> Homo sapiens
```

```
<210> 4924
<211> 255
<212> PRT
<213> Homo sapiens
```

```

<400> 4924
Ser Pro Ala Pro Asp Glu Gly Pro Gln Ala Ser Ala Gly Pro Gln Glu
 1          5          10          15
Val Gly Ser Leu Lys Pro Ser Ala Pro Xaa Pro Arg Thr Ser Phe Ser
      20          25          30
Ser Ala Ser Arg Ser Ser Ser Ala Ser Lys Ser Ser Ser Ser Val Pro
      35          40          45
Ser Ser Ser Ser Ser Ser Gly Ser Leu Met His Arg Leu Ala Ile Phe

```

```

      50              55              60
Ser Met Ala Ser Ile Gly Lys Gly Pro Leu Pro Leu Ser Phe Ser Arg
65              70              75              80
Ala Gly Gly Trp Pro Thr Lys Ala Lys Asn Ser Ala Ser Ser Ser
      85              90              95
Ser Ser Leu Ala Pro Ser Ser Gly Ile Ile Arg Pro Ser Gly Glu Arg
      100              105              110
Ser Thr Ser Arg Pro Ser Trp Arg Ala Ala Ala Ala Pro Leu Pro Gly
      115              120              125
Gly Pro Gly Gly Pro Ser Ser Cys Ala Ser Ser Arg Leu Asp Ala Arg
      130              135              140
Thr Thr Cys Pro Gln Ala Arg Pro Cys Pro Ala Pro Ser Pro Gly Ser
145              150              155              160
Val Ala Ala His Ser Pro Phe Leu Ser Pro Ala Leu Leu Val Gly Ala
      165              170              175
Leu Arg Pro Val Asp Pro Glu Pro Ser Leu Pro Cys Leu Ala Val Pro
      180              185              190
Leu Pro Pro Arg Ala Ser Gly Ala Ala Ala Pro Xaa Ser Ala Ala Ser
      195              200              205
Trp Ala Arg Arg Gly Leu Pro Ser Arg Asn Tyr Asn Ser Arg Gln Ile
      210              215              220
Ser Gln Gly Glu Asp Lys Met Thr Lys Arg Lys Lys Leu Arg Thr Ser
225              230              235              240
Ala Pro Leu Met Arg Lys Gln Asp Leu Pro Ala Gly Ser Ser Val
      245              250              255

```

<210> 4925

<211> 374

<212> DNA

<213> Homo sapiens

<400> 4925

```

gccaatattgg agaaagagct ccaggagatg gaggcacggt acgagaagga gtttgagat
60
ggatcggatg aaaatgaaat ggaagaacat gaactcaaag atgaggagga tggtaaagac
120
agtgatgagg ccgaggacgc tgagctctat gatgaccttt actgccagc atgtgacaaa
180
tcgttcaaga cagaaaaggc catgaagaat cagcagaagt caaagaagca tcgggaaatg
240
gtggccttgc taaaacaaca gctggaggag gaagaagaaa atttttcaag acctcaaatt
300
gatgaaaatc cattagatga caattctgag gaagaaatgg aagatgcacc aaaacaaaag
360
ctttctaaaa aaaa
374

```

<210> 4926

<211> 124

<212> PRT

<213> Homo sapiens

<400> 4926

Ala Asn Leu Glu Lys Glu Leu Gln Glu Met Glu Ala Arg Tyr Glu Lys

```

      1           5           10           15
Glu Phe Gly Asp Gly Ser Asp Glu Asn Glu Met Glu Glu His Glu Leu
      20           25           30
Lys Asp Glu Glu Asp Gly Lys Asp Ser Asp Glu Ala Glu Asp Ala Glu
      35           40           45
Leu Tyr Asp Asp Leu Tyr Cys Pro Ala Cys Asp Lys Ser Phe Lys Thr
      50           55           60
Glu Lys Ala Met Lys Asn His Glu Lys Ser Lys Lys His Arg Glu Met
      65           70           75           80
Val Ala Leu Leu Lys Gln Gln Leu Glu Glu Glu Glu Asn Phe Ser
      85           90           95
Arg Pro Gln Ile Asp Glu Asn Pro Leu Asp Asp Asn Ser Glu Glu Glu
      100           105           110
Met Glu Asp Ala Pro Lys Gln Lys Leu Ser Lys Lys
      115           120

```

<210> 4927

<211> 1649

<212> DNA

<213> Homo sapiens

<400> 4927

```

atccaccgct gagctgggag aaagatggcg gccgtgcgac aggatttggc ccagctcatg
60
aattcgagcg gctctcataa agatctggct ggcaagtatc gtcagatcct ggaaaaagcc
120
attcagttat ctggagcaga acaactagaa gctttgaaag cttttgtgga agcaatggta
180
aatgagaatg tcagtctcgt gatctcgcgg cagttgctga ctgatttttg cacacatctt
240
cctaacttgc ctgatagcac agccaaagaa atctatcact tcaccttgga aaagatccag
300
cctagagtca tttcatttga ggagcagggt gcttccataa gacagcatct tgcatttata
360
tatgagaaag aagaagattg gagaaatgca gcccaagtgt tgggtgggaat tcctttggaa
420
acaggacaaa aacagtacaa tgtagattat aaactggaga cttacttgaa gattgctagg
480
ctatatctgg aggatgatga tccagtccag gcagaggctt acataaatcg agcatcggtt
540
cttcagaatg aatcaaccaa tgaacaatta cagatacatt ataaggatat ctatgcacgt
600
gttcttgatt atagaagaaa attcattgaa gctgcacaaa ggtacaatga gctctcttac
660
aagacaatag tccacgaaag tgaaagacta gaggccttaa aacatgcttt gcactgtacg
720
atcttagcat cagcaggaca gcagcgttct cggatgctgg ctaccctttt taaggatgaa
780
aggtgccagc aacttgctgc ttatgggatc ctagagaaaa tgtatctaga caggatcatc
840
agaggggaacc agcttcaaga atttgctgcc atgctgatgc ctcacacaaa agcaactaca
900
gctgatgggt ccagcatctt ggacagagct gttattgaac acaatttggt gtctgcaagc
960

```

aaattatata ataatattac cttcgaagaa cttggagctc ttttagagat ccctgcagct
 1020
 aaggcggaaa agatagcatc tcaaatgata accgaaggac gtatgaatgg atttattgac
 1080
 cagattgatg gaatagttca ttttgaaaca cgagaagccc tgccaacgtg ggataagcag
 1140
 atccaatcac tttgtttcca agtgaataac cttttggaga aaattagtca aacagcacca
 1200
 gaatggacag cacaagccat ggaagcccag atggctcagt gaatccttgc agaacttctg
 1260
 tgcacatgac atctttttcc atgttgtgca gatcagtttc actatctcca aagcatttgc
 1320
 atcatgacct tatacatttc aatccctttt atgctggatt ccgtttaaag aagacattat
 1380
 tagagcagga agtacaagca tttaaaatat gtagttccca tatatttcag ggtctctgtg
 1440
 tattaagcta actcagatgt tttgaaagct ttttctttaa acagaggtga aatatctgtg
 1500
 gctaaaaagt ttgagatttg tgataacttt gtagtcatgt aaaacttaag tgcttcatgc
 1560
 ctctccaaat gtgggttattc taataaatgg agaaatgagc caaaaaaag tagtactttg
 1620
 tttttaaaaa aaaaaaaaaa aaaaaaaaaa
 1649

<210> 4928

<211> 405

<212> PRT

<213> Homo sapiens

<400> 4928

Met	Ala	Ala	Val	Arg	Gln	Asp	Leu	Ala	Gln	Leu	Met	Asn	Ser	Ser	Gly
1			5						10					15	
Ser	His	Lys	Asp	Leu	Ala	Gly	Lys	Tyr	Arg	Gln	Ile	Leu	Glu	Lys	Ala
			20					25					30		
Ile	Gln	Leu	Ser	Gly	Ala	Glu	Gln	Leu	Glu	Ala	Leu	Lys	Ala	Phe	Val
		35				40						45			
Glu	Ala	Met	Val	Asn	Glu	Asn	Val	Ser	Leu	Val	Ile	Ser	Arg	Gln	Leu
	50				55					60					
Leu	Thr	Asp	Phe	Cys	Thr	His	Leu	Pro	Asn	Leu	Pro	Asp	Ser	Thr	Ala
65				70					75					80	
Lys	Glu	Ile	Tyr	His	Phe	Thr	Leu	Glu	Lys	Ile	Gln	Pro	Arg	Val	Ile
			85					90					95		
Ser	Phe	Glu	Glu	Gln	Val	Ala	Ser	Ile	Arg	Gln	His	Leu	Ala	Ser	Ile
		100					105					110			
Tyr	Glu	Lys	Glu	Glu	Asp	Trp	Arg	Asn	Ala	Ala	Gln	Val	Leu	Val	Gly
	115					120					125				
Ile	Pro	Leu	Glu	Thr	Gly	Gln	Lys	Gln	Tyr	Asn	Val	Asp	Tyr	Lys	Leu
	130				135					140					
Glu	Thr	Tyr	Leu	Lys	Ile	Ala	Arg	Leu	Tyr	Leu	Glu	Asp	Asp	Asp	Pro
145				150					155					160	
Val	Gln	Ala	Glu	Ala	Tyr	Ile	Asn	Arg	Ala	Ser	Leu	Leu	Gln	Asn	Glu
			165					170					175		
Ser	Thr	Asn	Glu	Gln	Leu	Gln	Ile	His	Tyr	Lys	Val	Cys	Tyr	Ala	Arg

```

      180      185      190
Val Leu Asp Tyr Arg Arg Lys Phe Ile Glu Ala Ala Gln Arg Tyr Asn
      195      200      205
Glu Leu Ser Tyr Lys Thr Ile Val His Glu Ser Glu Arg Leu Glu Ala
      210      215      220
Leu Lys His Ala Leu His Cys Thr Ile Leu Ala Ser Ala Gly Gln Gln
      225      230      235      240
Arg Ser Arg Met Leu Ala Thr Leu Phe Lys Asp Glu Arg Cys Gln Gln
      245      250      255
Leu Ala Ala Tyr Gly Ile Leu Glu Lys Met Tyr Leu Asp Arg Ile Ile
      260      265      270
Arg Gly Asn Gln Leu Gln Glu Phe Ala Ala Met Leu Met Pro His Gln
      275      280      285
Lys Ala Thr Thr Ala Asp Gly Ser Ser Ile Leu Asp Arg Ala Val Ile
      290      295      300
Glu His Asn Leu Leu Ser Ala Ser Lys Leu Tyr Asn Asn Ile Thr Phe
      305      310      315      320
Glu Glu Leu Gly Ala Leu Leu Glu Ile Pro Ala Ala Lys Ala Glu Lys
      325      330      335
Ile Ala Ser Gln Met Ile Thr Glu Gly Arg Met Asn Gly Phe Ile Asp
      340      345      350
Gln Ile Asp Gly Ile Val His Phe Glu Thr Arg Glu Ala Leu Pro Thr
      355      360      365
Trp Asp Lys Gln Ile Gln Ser Leu Cys Phe Gln Val Asn Asn Leu Leu
      370      375      380
Glu Lys Ile Ser Gln Thr Ala Pro Glu Trp Thr Ala Gln Ala Met Glu
      385      390      395      400
Ala Gln Met Ala Gln
      405

```

<210> 4929

<211> 5907

<212> DNA

<213> Homo sapiens

<400> 4929

```

ntaatcgcg ggcgttttggc gccatcttta gatggcg gga gtaagaggaa aacgattgtg
60
aggcg ggaac ggctttctgc tgcctttttt gggccccgaa aagggtcagc tggccgggct
120
ttggggcgcg tgccctgagg cgcgagcgc gtttgctacg atgcgggggc tgctcggggc
180
tccgtcccct gggctgggga cgcgccgaat gtgaccgcct cccgctccct caccgcgcgc
240
ggggaggagg agcgggcgag aagctgccgc cgaacgacag gacgttgggg cggcctggct
300
ccctcaggta taagtattgt ttaagctgca tcaatggagc acatacagg agcttgaag
360
acgatcagca atggtttttg attcaaagat gccgtgtttg atggctccag ctgcatctct
420
cctacaatag ttcagcagtt tggtatcag cgccgggcat cagatgatgg caaactcaca
480
gatccttcta agacaagcaa cactatccgt gttttcttgc cgaacaagca aagaacagtg
540

```


gtcaatgtgc gaaatggaat gagcttgcat gactgcctta tgaaagcact caaggtgagg
600
ggcctgcaac cagagtgtg tgcagtgttc agacttctcc acgaacacaa aggtaaaaaa
660
gcacgcttag attggaatac tgatgtgctg tctttgattg gagaagaact tcaagtagat
720
ttcctggatc atgttcccct cacaacacac aactttgctc ggaagacgtt cctgaagctt
780
gccttctgtg acatctgtca gaaattcctg ctcaatggat ttgatgtca gacttgtggc
840
tacaaatttc atgagcactg tagcaccaaa gtacctacta tgtgtgtgga ctggagtaac
900
atcagacaac tcttattgtt tccaaattcc actattggtg atagtggagt cccagcacta
960
ccttctttga ctatgcgtcg tatgcgagag tctgtttcca ggatgcctgt tagttctcag
1020
cacagatatt ctacacctca cgccttcacc tttaacacct ccagtccttc atctgaaggt
1080
tccctctccc agaggcagag gtcgacatcc acacctaatag tccacatggt cagcaccacc
1140
ctgcctgtgg acagcaggat gattgaggat gcaattcgaa gtcacagcga atcagcctca
1200
ccttcagccc tgtccagtag cccaacaat ctgagcccaa caggctggtc acagccgaaa
1260
acccccgtgc cagcacaag agagcgggca ccagtatctg ggaccagga gaaaaacaaa
1320
attaggcctc gtggacagag agattcaagc tattattggg aaatagaagc cagtgaagtg
1380
atgtgtcca ctcgattgg gtcaggctct tttggaactg tttataaggg taaatggcac
1440
ggagatgttg cagtaaagat cctaaagggt gtcgaccaa cccagagca attccaggcc
1500
ttcaggaatg aggtggctgt tctgcgcaa acacggcatg tgaacattct gcttttcatg
1560
gggtacatga caaaggacaa cctggcaatt gtgaccaggt ggtgcgaggg cagcagcctc
1620
tacaacacc tgcattgcca ggagaccaag tttcagatgt tccagctaatt tgacattgcc
1680
cggcagacgg ctcagggaat ggactatttg catgcaaaga acatcatcca tagagacatg
1740
aaatccaaca atatatttct ccatgaaggc ttaacagtga aaattggaga ttttggtttg
1800
gcaacagtaa agtcacgtg gagtgggtct cagcagggtg aacaacctac tggctctgtc
1860
ctctggatgg cccagaggt gatccgaatg caggataaca acccattcag tttccagtcg
1920
gatgtctact cctatggcat cgtattgtat gaactgatga cgggggagct tccttattct
1980
cacatcaaca accgagatca gatcatcttc atgggtgggccc gaggatatgc ctccccagat
2040
cttagtaagc tatataagaa ctgccccaaa gcaatgaaga ggctggtagc tgactgtgtg
2100
aagaaagtaa aggaagagag gcctcttttt cccagatcc tgtcttccat tgagctgtc
2160

caacactctc taccgaagat caaccggagc gcttccgagc catccttgca tcgggcagcc
2220
cacactgagg atatcaatgc ttgcacgctg accacgtccc cgaggctgcc tgtcttctag
2280
ttgactttgc acctgtcttc aggctgccag gggaggagga gaagccagca ggcaccactt
2340
ttctgtctcc tttctccaga ggcagaacac atgttttcag agaagctgct gctaaggacc
2400
ttctagactg ctcacagggc cttaacttca tgttgccctc tttctatcc ctttggggcc
2460
ctgggagaag gaagccattt gcagtgtggt tgtgtcctgc tccctcccca cattcccat
2520
gctcaaggcc cagccttctg tagatgcgca agtggatggt gatggtagta caaaaagcag
2580
gggcccagcc ccagctgttg gctacatgag tatttagagg aagtaaggta gcaggcagtc
2640
cagccctgat gtggagacac atgggatttt ggaaatcagc ttctggagga atgcatgtca
2700
caggcgggac tttcttcaga gagtgggtgca gcgccagaca ttttgacat aaggcaccaa
2760
acagcccagg actgccgaga ctctggccgc ccgaaggagc ctgctttggt actatggaac
2820
ttttcttagg ggacacgtcc tcctttcaca gcttctaagg tgtccagtgc attgggatgg
2880
ttttccaggc aaggcactcg gccaatccgc atctcagccc tctcaggag cagtcttcca
2940
tcatgctgaa ttttgtcttc caggagctgc ccctatgggg cggggccgca gggccagcct
3000
tgtttctcta caaacaaca aacaaacagc cttgtttctc taacaacaa gggccagcct
3060
tgtttctcta acaacaacaa aaacaacag ccttgtttct ctagtcacat catgtgtata
3120
caaggaagcc aggaatacag gttttcttga tgatttgggt ttaattttg tttttattgc
3180
acctgacaaa atacagttat ctgatgttcc ctcaattatg ttattttaat aaaataaatt
3240
aaatttaggt gtaatggctg gctgttacct ctttttaaag taattctgag ctcacaactt
3300
gaatgcccc a ttgttcacc ctcttcagga gcagaattca agaacaggaa atgtgcccag
3360
agcctaggct gggaatgaat ttgtaattta acctttgtac tctttgtaaa cctctactga
3420
agagttaagt ataaaaatta attaagcaga aagtactcta aactcagcta ataccttaag
3480
taatacatat tataaactat ttatttatat ggtaggtaca gcttttttaa acacaaaaat
3540
agattagata aattccagct tggaacaagc tagtgtggt tcacaagggt gtgtcaccc
3600
ttcaattaaa atcaaaatga ctacaagact tgccatcagc tctcttcagg accactgctg
3660
ggtcagaatc agaaaccttg ggtgccatga aatttttaca aaatttcaaa tcaaagccag
3720
gctttgcagc tagataatag atcacttgag tacgaaccac acatgtaagt gcacgtatat
3780

ttgagttctc aatacaatta ccctgatggg caagaacca caggtgagag cagaggcttg
3840
gttcccctag agggccctgg ctggaggccc caacaccaac cagacgacag gagggccaga
3900
ctgctacca gtactgtacc tcctgctcct tcaagagcct ccctaaggga gaagaagatc
3960
tatacttcca ctttgtttgc tgcacatgtg gcaacaagat tgctaccctg atttgggaca
4020
cttgagagaa cttgaaaaaa atgaccaccc ttaaagccct agaaaaaagt tgtatgtttg
4080
ttaaccagct aatctgcgct cacttggcat tgtgtgttct tgaaagctct gtataaatca
4140
aaattttgac gacacactaa atacactaga gaaatacact atagaggaat ccttttatag
4200
ggctgaagac tcctttggta agaaaaatat gctgcattag gggcagctgc aagtttacta
4260
tttctgggga agaaaagatc aaagataaga gccaggtttg ttttttaaag caatcaatcc
4320
aaacagtttg ggtgtttgtt agttgttacc cctgaggggc ttgaggtgta actatatcag
4380
ctataaaaat agcaattcca tacatttaat taggttactt tatatcttcc actcttcccc
4440
atggctgtaa taatggagat tgaatgagac taaggctaag cccaactcca ctcaaactcca
4500
agtcacacgt caccttggct gcagtacagg gaagctccgc acaccctggc ttgggaaagt
4560
ttcgcccgat ggagcccaag atgcagggca accatctact ctttaggggt ctgatgatcc
4620
cactccagaa aggtgcatga agagggtcccc gagctctgtc atgtcgacat cttcattgtt
4680
ggggacatgc cggttttctc ggttctcgat gaaatcccag agccgcactg aattaaagaa
4740
cctcacagt ccttgagaac tgagctgttt ccgaggtttc tcaggctctg ctagccgccc
4800
atcggggtaa gcatggcgat aaagacattt gtttccaaat gggcagggtcc ccttgccctg
4860
ctcaaagtat ttacaggctt ttttccccat cccctgtttg aaagcttcaa tcaactcgtt
4920
ctttttattc tgatcttcca cccaatacac acttgggaatt acaaactctg atatcacacg
4980
gcattctgga caagacttaa tgattgggtt ttcaaactgt ttggcacacc gccactgccg
5040
gatgcaggac aaacagtacg tgtgattgca attggagaga atcccaaact tcctctcaga
5100
agcagaggcc ttctccagga tcacttccat gcagatactg cacactttgt cctggcttgc
5160
ctggaaggca aaggcctttt ccatctcgtg ttcgaacgtc aacatgcaga tcttttcag
5220
agccttctc tgctctgggt cgaatgggtg caagacttgc agcctacaga tttcacacac
5280
ctccccgtgc aggtagacac aggcaccccc aaaccggcac tccccagcag ctgcgtaggg
5340
gcacagctgc tgctcgttgc tgtaggagct gctggcctcc acgtcatcaa ggccactcct
5400

gatggcatcc aggtaggaat gcggcttcat ctcggggctg ggctgggggt cgctgcagct
 5460
 gcctgggatta ctcacatgc tcggctgggt cttcctttca gccatgccag agagatttcg
 5520
 gtctctaaga accaatgttc tcttttcacg ctttcgggt tcatgtgagt tagttttcac
 5580
 aatggatgca gtgacctcgg aaggaggggtg aggactgtgg aaagctgggg agggcacact
 5640
 gtgggccatg gtgcccacag cacctccagc tgcagcagag ggctcgtgt ggtcatatct
 5700
 gcaccgagtt ccataggcac agtagccctt ctggtagtac ttgcagatgg tggacgggtt
 5760
 gctgtttgcc aagtcatgtg agaataggca ctgacttcct tcccacaca caccatgcat
 5820
 aaaatacctg caagtgatct gcttggtgct catggtggct gggctgaggg accgtcgtcg
 5880
 tgccgcgcgc tctgcagcc gctgccc
 5907

<210> 4930

<211> 648

<212> PRT

<213> Homo sapiens

<400> 4930

Met	Glu	His	Ile	Gln	Gly	Ala	Trp	Lys	Thr	Ile	Ser	Asn	Gly	Phe	Gly	15
1				5					10							
Phe	Lys	Asp	Ala	Val	Phe	Asp	Gly	Ser	Ser	Cys	Ile	Ser	Pro	Thr	Ile	30
			20					25								
Val	Gln	Gln	Phe	Gly	Tyr	Gln	Arg	Ala	Ser	Asp	Asp	Gly	Lys	Leu		45
			35				40									
Thr	Asp	Pro	Ser	Lys	Thr	Ser	Asn	Thr	Ile	Arg	Val	Phe	Leu	Pro	Asn	60
			50			55										
Lys	Gln	Arg	Thr	Val	Val	Asn	Val	Arg	Asn	Gly	Met	Ser	Leu	His	Asp	80
65					70					75						
Cys	Leu	Met	Lys	Ala	Leu	Lys	Val	Arg	Gly	Leu	Gln	Pro	Glu	Cys	Cys	95
				85					90							
Ala	Val	Phe	Arg	Leu	Leu	His	Glu	His	Lys	Gly	Lys	Lys	Ala	Arg	Leu	110
			100					105								
Asp	Trp	Asn	Thr	Asp	Ala	Ala	Ser	Leu	Ile	Gly	Glu	Glu	Leu	Gln	Val	125
			115					120								
Asp	Phe	Leu	Asp	His	Val	Pro	Leu	Thr	Thr	His	Asn	Phe	Ala	Arg	Lys	140
			130			135										
Thr	Phe	Leu	Lys	Leu	Ala	Phe	Cys	Asp	Ile	Cys	Gln	Lys	Phe	Leu	Leu	160
145					150					155						
Asn	Gly	Phe	Arg	Cys	Gln	Thr	Cys	Gly	Tyr	Lys	Phe	His	Glu	His	Cys	175
				165					170							
Ser	Thr	Lys	Val	Pro	Thr	Met	Cys	Val	Asp	Trp	Ser	Asn	Ile	Arg	Gln	190
			180					185								
Leu	Leu	Leu	Phe	Pro	Asn	Ser	Thr	Ile	Gly	Asp	Ser	Gly	Val	Pro	Ala	205
			195				200									
Leu	Pro	Ser	Leu	Thr	Met	Arg	Arg	Met	Arg	Glu	Ser	Val	Ser	Arg	Met	220
					215											
Pro	Val	Ser	Ser	Gln	His	Arg	Tyr	Ser	Thr	Pro	His	Ala	Phe	Thr	Phe	

225									230									235									240				
Asn	Thr	Ser	Ser	Pro	Ser	Ser	Glu	Gly	Ser	Leu	Ser	Gln	Arg	Gln	Arg	Asn	Thr	Ser	Ser	Pro	Ser	Ser	Glu	Gly	Ser	Leu	Ser	Gln	Arg	Gln	Arg
				245					250								255														
Ser	Thr	Ser	Thr	Pro	Asn	Val	His	Met	Val	Ser	Thr	Thr	Leu	Pro	Val	Ser	Thr	Ser	Ser	Pro	Ser	Ser	Pro	Asn	Asn	Leu	Ser	Pro	Thr	Gly	
				260					265								270														
Asp	Ser	Arg	Met	Ile	Glu	Asp	Ala	Ile	Arg	Ser	His	Ser	Glu	Ser	Ala	Asp	Ser	Arg	Met	Ile	Glu	Asp	Ala	Ile	Arg	Ser	His	Ser	Glu	Ser	Ala
				275					280								285														
Ser	Pro	Ser	Ala	Leu	Ser	Ser	Ser	Pro	Asn	Asn	Leu	Ser	Pro	Thr	Gly	Ser	Pro	Ser	Ala	Leu	Ser	Ser	Pro	Asn	Asn	Leu	Ser	Pro	Thr	Gly	
				290					295								300														
Trp	Ser	Gln	Pro	Lys	Thr	Pro	Val	Pro	Ala	Gln	Arg	Glu	Arg	Ala	Pro	Trp	Ser	Gln	Pro	Lys	Thr	Pro	Val	Pro	Ala	Gln	Arg	Glu	Arg	Ala	Pro
				305					310								315														
Val	Ser	Gly	Thr	Gln	Glu	Lys	Asn	Lys	Ile	Arg	Pro	Arg	Gly	Gln	Arg	Val	Ser	Gly	Thr	Gln	Glu	Lys	Asn	Lys	Ile	Arg	Pro	Arg	Gly	Gln	Arg
				325					330								335														
Asp	Ser	Ser	Tyr	Tyr	Trp	Glu	Ile	Glu	Ala	Ser	Glu	Val	Met	Leu	Ser	Asp	Ser	Ser	Tyr	Tyr	Trp	Glu	Ile	Glu	Ala	Ser	Glu	Val	Met	Leu	Ser
				340					345								350														
Thr	Arg	Ile	Gly	Ser	Gly	Ser	Phe	Gly	Thr	Val	Tyr	Lys	Gly	Lys	Trp	Thr	Arg	Ile	Gly	Ser	Gly	Ser	Phe	Gly	Thr	Val	Tyr	Lys	Gly	Lys	Trp
				355					360								365														
His	Gly	Asp	Val	Ala	Val	Lys	Ile	Leu	Lys	Val	Val	Asp	Pro	Thr	Pro	His	Gly	Asp	Val	Ala	Val	Lys	Ile	Leu	Lys	Val	Val	Asp	Pro	Thr	Pro
				370					375								380														
Glu	Gln	Phe	Gln	Ala	Phe	Arg	Asn	Glu	Val	Ala	Val	Leu	Arg	Lys	Thr	Glu	Gln	Phe	Gln	Ala	Phe	Arg	Asn	Glu	Val	Ala	Val	Leu	Arg	Lys	Thr
				385					390								395														
Arg	His	Val	Asn	Ile	Leu	Leu	Phe	Met	Gly	Tyr	Met	Thr	Lys	Asp	Asn	Arg	His	Val	Asn	Ile	Leu	Leu	Phe	Met	Gly	Tyr	Met	Thr	Lys	Asp	Asn
				405					410								415														
Leu	Ala	Ile	Val	Thr	Gln	Trp	Cys	Glu	Gly	Ser	Ser	Leu	Tyr	Lys	His	Leu	Ala	Ile	Val	Thr	Gln	Trp	Cys	Glu	Gly	Ser	Ser	Leu	Tyr	Lys	His
				420					425								430														
Leu	His	Val	Gln	Glu	Thr	Lys	Phe	Gln	Met	Phe	Gln	Leu	Ile	Asp	Ile	Leu	His	Val	Gln	Glu	Thr	Lys	Phe	Gln	Met	Phe	Gln	Leu	Ile	Asp	Ile
				435					440								445														
Ala	Arg	Gln	Thr	Ala	Gln	Gly	Met	Asp	Tyr	Leu	His	Ala	Lys	Asn	Ile	Ala	Arg	Gln	Thr	Ala	Gln	Gly	Met	Asp	Tyr	Leu	His	Ala	Lys	Asn	Ile
				450					455								460														
Ile	His	Arg	Asp	Met	Lys</																										

<210> 4931
 <211> 261
 <212> DNA
 <213> Homo sapiens

<400> 4931
 atcatcctgg gcctggcctt tggcnacctg gagagtaagt ccagcatcaa gcgggtgctg
 60
 gccatcacca cagtgtgtc cccggcccta tccgtcaccc aggggacccg gaagatcctg
 120
 taccggtatg cccatctctc agctgaggac tttaatatct atggccatgg gggccgccag
 180
 ttctggctgg tcagctcctg cttcttcttc ctgctcggag gagcttctac gtgtatgcgg
 240
 gcatcctggc accgctcaac n
 261

<210> 4932
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 4932
 Ile Ile Leu Gly Leu Ala Phe Gly Xaa Leu Glu Ser Lys Ser Ser Ile
 1 5 10 15
 Lys Arg Val Leu Ala Ile Thr Thr Val Leu Ser Pro Ala Leu Ser Val
 20 25 30
 Thr Gln Gly Thr Arg Lys Ile Leu Tyr Pro Tyr Ala His Leu Ser Ala
 35 40 45
 Glu Asp Phe Asn Ile Tyr Gly His Gly Gly Arg Gln Phe Trp Leu Val
 50 55 60
 Ser Ser Cys Phe Phe Phe Leu Leu Gly Gly Ala Ser Thr Cys Met Arg
 65 70 75 80
 Ala Ser Trp His Arg Ser Thr
 85

<210> 4933
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 4933
 ntgacgaggg cgctcgtggt tttctcttct gccctcactc agccgcgagg gccagccgc
 60
 ctttgtcctc ctggtggcca cgggtattttt agcacgctcc gttctgaggg aggacgggct
 120
 ccaagggctg ggcatggcgg caaccgtggt tcacctctc tcgtcttctt ccacaggtgt
 180
 gcttccccga cagctgcagc catgggggtct gaggaccacg gcgcccagaa cccagctgt
 240
 aaaatcatga cgtttcgccc aaccatggaa gaatttaaag acttcaacaa atacgtggcc
 300
 tacatagagt cgcagggagc ccaccgggag ggctggcca agatcatccc cccgaaggag
 360

tggaagccgc ggcagacgta tgatgacatc gacgacgtgg tgatcccggc gcccatccag
 420
 cagggtggtga cgggccagtc gggcctcttc acgcagtaca atatccagaa gaaggccatg
 480
 acagtgggcg agtaccgccg cctggccaac agcgagaagt actgtacccc gcggcaccag
 540
 gactttgacg accttgaacg caaatactgg aagaacctca cctttgtctc cccgatctac
 600
 ggggctgaca tcagcggctc tttgtatgat gacgtaagta tgaggctccg gggaagaaca
 660
 gggaccagct tcctggtggg tgggtggtggg agggccctga acgggactct gccttggcag
 720
 atgaagcttc caggcaggca aggttaaccc cctcgcccag gctctggatg cgggcctcgc
 780
 cctgtggtga cgaaagagga agccaggctt tctctgattt ttgcagggcc cctcctgcct
 840
 caccctgcag cccccaccct gagctcaccg tgggcccacc tctggcctca gcagccggcc
 900
 cacagcgtgt tacaaacacg tgtactttcc cagtcctgc cgctcgtctt cctggcactg
 960
 tggagcctcg agtcc
 975

<210> 4934

<211> 181

<212> PRT

<213> Homo sapiens

<400> 4934

Met	Gly	Ser	Glu	Asp	His	Gly	Ala	Gln	Asn	Pro	Ser	Cys	Lys	Ile	Met
1				5				10					15		
Thr	Phe	Arg	Pro	Thr	Met	Glu	Glu	Phe	Lys	Asp	Phe	Asn	Lys	Tyr	Val
			20					25					30		
Ala	Tyr	Ile	Glu	Ser	Gln	Gly	Ala	His	Arg	Ala	Gly	Leu	Ala	Lys	Ile
		35					40					45			
Ile	Pro	Pro	Lys	Glu	Trp	Lys	Pro	Arg	Gln	Thr	Tyr	Asp	Asp	Ile	Asp
	50					55					60				
Asp	Val	Val	Ile	Pro	Ala	Pro	Ile	Gln	Gln	Val	Val	Thr	Gly	Gln	Ser
65					70					75				80	
Gly	Leu	Phe	Thr	Gln	Tyr	Asn	Ile	Gln	Lys	Lys	Ala	Met	Thr	Val	Gly
			85					90						95	
Glu	Tyr	Arg	Arg	Leu	Ala	Asn	Ser	Glu	Lys	Tyr	Cys	Thr	Pro	Arg	His
			100					105					110		
Gln	Asp	Phe	Asp	Asp	Leu	Glu	Arg	Lys	Tyr	Trp	Lys	Asn	Leu	Thr	Phe
		115					120					125			
Val	Ser	Pro	Ile	Tyr	Gly	Ala	Asp	Ile	Ser	Gly	Ser	Leu	Tyr	Asp	Asp
		130				135					140				
Val	Ser	Met	Arg	Leu	Arg	Gly	Arg	Thr	Gly	Thr	Ser	Phe	Leu	Val	Gly
145				150						155				160	
Gly	Gly	Gly	Arg	Ala	Leu	Asn	Gly	Thr	Leu	Pro	Trp	Gln	Met	Lys	Leu
			165					170						175	
Pro	Gly	Arg	Gln	Gly											
			180												

<210> 4935
<211> 1668
<212> DNA
<213> Homo sapiens

<400> 4935
ggcaagttct tagcgtgctg gagccaggac gggtttctgc ggggtgttcaa ctttgactca
60
gtggagctgc acggtacgat gaaaagctac tttgggggct tgctgtgtgt gtgctggagc
120
ccggatggca agtacatcgt gacaggtggg gaggacgact tggtgacagt ctggtccttt
180
gtagactgcc gagtaatagc cagaggccac gggcacaagt cctgggtcag tgttgtagcg
240
tttgaccctt ataccactag tgtagaagaa ggtgacccta tggagttag tggcagcgat
300
gaggacttcc aagaccttct tcattttggc gagatcgagc aaatagtaca cagtccaggc
360
tctccaaacg gaactctaca gacagccgcc ccgagtgtca cgtatcgggt tggttccgtg
420
ggccaggaca cacagctctg tttatgggac cttacagaag atatcctttt cctcaccaa
480
cccctctcaa gagcaaggac acacacaaat gtcatgaatg ccacgagtcc tctgctgga
540
agcaatggga acagtgttac aacacccggg aactctgtgc cgcctctctt gccacggtcc
600
aacagccttc cacattcagc agtctcaaat gctggcagca aaagcagtgt catggacggg
660
gccattgctt ctggggtcag caaatttgca acactttcac tacatgaccg gaaggagagg
720
caccacgaga aagatcacia gcgaaatcat agcatgggac acatttctag caagagcagt
780
gacaaactga atctagttac caaaaccaa acggaccctg ctaaaactct gggaaacgcc
840
ctgtgtcctc gaatggaaga tgttcccttg ttagagccgc tgatatgtaa aaagatagca
900
catgagagac tgactgtact aatatttctt gaagactgta tagtactgc ttgtcaggag
960
ggatttattt gcacatgggg aaggcctggg aaagtggtaa gttttaatcc ttaatgctgc
1020
accagatcta gaacttgaat aggtagtgc ttttttctt ttcgtgggag ggggtgggtg
1080
tacaatgaat gtgaatgaca cttcttattc ttaatgtaaa tctcaatgca tcagagccat
1140
aattttggat actgcatgcc atgtaattct gaatcatttg ataatttacc ttagagcatt
1200
taaaaaaata taatcaaact aattgccagc caagtcagtc atcctcctgg gagtatatag
1260
agtcccaagg ttagcgtcc tgtattagac tatttcaatt ttaggaaaat catgaccatg
1320
tggggaaaca atgacttta aatgctgaaa ttaaaattta tgctttaact ggaatatttt
1380
ttgcttaact actcaattag aatattgtac acctgatcaa tgtgtgttca gcacagatgg
1440

ccatgaattg tcatttatag tccaattttt tatcttaatc ataaaatggt taggaatcta
 1500
 tgaaatttaa ctttaggaac aaaacgttta gcagggttga ttgatattat ttttacattg
 1560
 ttctggcaat ccacagaaaag agaagagcct taatttttaa aaccattttt agtcatttta
 1620
 tgacaattaa agttgtttta taaacatctt ttttcaaaga aaaaaaaaa
 1668

<210> 4936

<211> 337

<212> PRT

<213> Homo sapiens

<400> 4936

Gly	Lys	Phe	Leu	Ala	Cys	Val	Ser	Gln	Asp	Gly	Phe	Leu	Arg	Val	Phe
1				5				10						15	
Asn	Phe	Asp	Ser	Val	Glu	Leu	His	Gly	Thr	Met	Lys	Ser	Tyr	Phe	Gly
			20					25					30		
Gly	Leu	Leu	Cys	Val	Cys	Trp	Ser	Pro	Asp	Gly	Lys	Tyr	Ile	Val	Thr
		35					40					45			
Gly	Gly	Glu	Asp	Asp	Leu	Val	Thr	Val	Trp	Ser	Phe	Val	Asp	Cys	Arg
		50				55					60				
Val	Ile	Ala	Arg	Gly	His	Gly	His	Lys	Ser	Trp	Val	Ser	Val	Val	Ala
65					70					75					80
Phe	Asp	Pro	Tyr	Thr	Thr	Ser	Val	Glu	Glu	Gly	Asp	Pro	Met	Glu	Phe
				85					90					95	
Ser	Gly	Ser	Asp	Glu	Asp	Phe	Gln	Asp	Leu	Leu	His	Phe	Gly	Glu	Ile
			100					105					110		
Glu	Gln	Ile	Val	His	Ser	Pro	Gly	Ser	Pro	Asn	Gly	Thr	Leu	Gln	Thr
		115					120					125			
Ala	Ala	Pro	Ser	Val	Thr	Tyr	Arg	Phe	Gly	Ser	Val	Gly	Gln	Asp	Thr
		130					135				140				
Gln	Leu	Cys	Leu	Trp	Asp	Leu	Thr	Glu	Asp	Ile	Leu	Phe	Pro	His	Gln
145					150					155					160
Pro	Leu	Ser	Arg	Ala	Arg	Thr	His	Thr	Asn	Val	Met	Asn	Ala	Thr	Ser
			165						170					175	
Pro	Pro	Ala	Gly	Ser	Asn	Gly	Asn	Ser	Val	Thr	Thr	Pro	Gly	Asn	Ser
			180					185					190		
Val	Pro	Pro	Pro	Leu	Pro	Arg	Ser	Asn	Ser	Leu	Pro	His	Ser	Ala	Val
		195					200					205			
Ser	Asn	Ala	Gly	Ser	Lys	Ser	Ser	Val	Met	Asp	Gly	Ala	Ile	Ala	Ser
		210				215					220				
Gly	Val	Ser	Lys	Phe	Ala	Thr	Leu	Ser	Leu	His	Asp	Arg	Lys	Glu	Arg
225					230					235					240
His	His	Glu	Lys	Asp	His	Lys	Arg	Asn	His	Ser	Met	Gly	His	Ile	Ser
			245						250					255	
Ser	Lys	Ser	Ser	Asp	Lys	Leu	Asn	Leu	Val	Thr	Lys	Thr	Lys	Thr	Asp
			260					265					270		
Pro	Ala	Lys	Thr	Leu	Gly	Thr	Pro	Leu	Cys	Pro	Arg	Met	Glu	Asp	Val
		275					280					285			
Pro	Leu	Leu	Glu	Pro	Leu	Ile	Cys	Lys	Lys	Ile	Ala	His	Glu	Arg	Leu
		290				295					300				
Thr	Val	Leu	Ile	Phe	Leu	Glu	Asp	Cys	Ile	Val	Thr	Ala	Cys	Gln	Glu

```
<210> 4937
<211> 715
<212> DNA
<213> Homo sapiens
```

```
<210> 4938
<211> 109
<212> PRT
<213> Homo sapiens
```

4110

85 90 95
 Trp Ala Leu Tyr Lys Gln Arg Glu Ala Pro Glu Leu Val
 100 105

<210> 4939
 <211> 730
 <212> DNA
 <213> Homo sapiens

<400> 4939
 nnacgcgtcc acttttctag aagcccccca gcctccacca tggctcccat cccctctgcc
 60
 ctcgctgtct gggagcccgcc gggatccagc ccacagctgt cctctgcgcc tgcagattcc
 120
 tcggcctcta cccgccctcc ccaaggtcct cctccctgg actcaaaagc ctctacttgg
 180
 ctgcctctgc cagtcacctc ttctctgtct gagccctcca gaccaaattc ttgccacct
 240
 gcatgtctctc ctgctgtctc ctcttcttt tctttcgagt ccagccttg cccaagcgcc
 300
 ccttccaaag cttcaccagc gccagcagcg ctgatgtgtg ggaccacatc acccccata
 360
 atcccagcag ccacagagcc agtctgtgca tcctcacggc cggggaggcc cacagccacc
 420
 gcttgagcc tccagcctct tctggatgtt ctgtcagcct ccgcctctc atcctcagtt
 480
 tctctggcat aggcctctcc cagtgcaggc caaggccctg cgtctgccc tgtgcttccg
 540
 tccagctcct gggtctctga gacagatgcc tctcctcctc cagttccaca tcccggtcc
 600
 tgggtgtgca gccctcccc gctgcctct gggacttctg atagttcaga ctctcggtct
 660
 ccttcagcct cagccgccag ggctggcct cccgcagtct cctcctctc ccgctgctcg
 720
 ccacggccg
 730

<210> 4940
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 4940
 Ser Arg Ser Pro Pro Ala Ser Thr Met Ala Pro Ile Pro Ser Ala Leu
 1 5 10 15
 Ala Val Trp Glu Pro Ala Gly Ser Ser Pro Gln Leu Ser Ser Ala Pro
 20 25 30
 Ala Asp Ser Ser Ala Ser Thr Arg Pro Pro Gln Gly Pro Pro Ser Leu
 35 40 45
 Asp Ser Lys Ala Ser Thr Trp Leu Pro Leu Pro Val Thr Ser Ser Ser
 50 55 60
 Ala Glu Pro Ser Arg Pro Asn Ser Cys Pro Pro Ala Cys Ser Pro Ala
 65 70 75 80
 Ala Ala Ser Ser Phe Ser Phe Glu Ser Gln Pro Cys Pro Ser Ala Pro

```
<210> 4941
<211> 1718
<212> DNA
<213> Homo sapiens
```

4112

tcttacttca tggcttggga gttgccaaaa agagcttata gccggaagcc ctgggacaac
 1200
 caacagcaga cagtggccaa aatttgcaag tgccttgtga acacccaccg agacagcgcc
 1260
 ttcatattcc tcagccagag cctggagtat gccagaact cacgggcctc cctccggaag
 1320
 tgctcagtca tgttcatagg gtccctggtc ccctgcatgg agagcataat gacagaagat
 1380
 cgtctgaatg aagtgaaagc tgctctggat aacttgagac atgaccaga agcatcagtg
 1440
 tgcattctacg cagcccaggt ccaggaccac atcctggcca gctgctggca gaactcctgg
 1500
 ctgccgcacg ggaactcatg ggtgtgttac tcagccacca cccaccgctg gagccccagc
 1560
 tgtgagaacc tgcccacttc ccaccagcgg cgctcctgga tcatgcaggc actgggctcc
 1620
 tggaagatgt ccttgaagaa gtgacgtccc tgagcccaa accctcctca ggggtggtga
 1680
 gttccagcca tgctccctat aaatgtcatg tggcttaa
 1718

<210> 4942

<211> 469

<212> PRT

<213> Homo sapiens

<400> 4942

Met	Gly	Arg	Val	Arg	Arg	Ile	Tyr	Pro	Gln	Leu	Leu	Leu	Ala	Leu	Leu
1				5				10					15		
Ile	Gln	Val	His	Tyr	His	Ile	Gly	Leu	Asn	Leu	Pro	Gly	Cys	Val	Ala
		20						25					30		
Pro	Pro	Lys	Asp	Thr	Lys	Lys	Gly	Ala	Gln	Pro	Ser	Pro	Phe	Val	Pro
		35					40					45			
Val	Arg	Trp	Val	Val	Lys	Val	Val	Lys	Thr	Leu	Leu	Leu	Arg	Met	Gly
	50				55					60					
Cys	Ser	Tyr	Glu	Thr	Thr	Phe	Leu	Glu	Asp	Gln	Gly	Gly	Trp	Glu	Leu
65				70					75					80	
Met	Glu	Gln	Val	Glu	Ser	His	His	Arg	Gly	Val	Ala	Leu	Leu	Ala	Arg
			85					90						95	
Ala	Met	Val	Gln	Tyr	Ser	Cys	Gln	Glu	Leu	Cys	Arg	Ile	Leu	Tyr	Leu
		100					105						110		
Leu	Ile	Pro	Leu	Leu	Glu	Arg	Gly	Asp	Glu	Lys	His	Arg	Ile	Thr	Ala
	115						120					125			
Thr	Ala	Phe	Phe	Val	Glu	Leu	Leu	Gln	Met	Glu	Gln	Val	Arg	Arg	Ile
	130				135					140					
Pro	Glu	Glu	Tyr	Ser	Leu	Gly	Arg	Met	Ala	Glu	Gly	Leu	Ser	His	His
145				150					155					160	
Asp	Pro	Ile	Met	Lys	Val	Leu	Ser	Ile	Arg	Gly	Leu	Val	Ile	Leu	Ala
			165					170						175	
Arg	Arg	Ser	Glu	Lys	Thr	Ala	Lys	Val	Lys	Ala	Leu	Leu	Pro	Ser	Met
		180					185						190		
Val	Lys	Gly	Leu	Lys	Asn	Met	Asp	Gly	Met	Leu	Val	Val	Glu	Ala	Val
	195					200							205		
His	Asn	Leu	Lys	Ala	Val	Phe	Lys	Gly	Arg	Asp	Gln	Lys	Leu	Met	Asp

210 215 220
 Ser Ala Val Tyr Val Glu Met Leu Gln Ile Leu Leu Pro His Phe Ser
 225 230 235 240
 Asp Ala Arg Glu Val Val Arg Ser Ser Cys Ile Asn Leu Tyr Gly Lys
 245 250 255
 Val Val Gln Lys Leu Arg Ala Pro Arg Thr Gln Ala Met Glu Glu Gln
 260 265 270
 Leu Val Ser Thr Leu Val Pro Leu Leu Leu Thr Met Gln Glu Gly Asn
 275 280 285
 Ser Lys Val Ser Gln Lys Cys Val Lys Thr Leu Leu Arg Cys Ser Tyr
 290 295 300
 Phe Met Ala Trp Glu Leu Pro Lys Arg Ala Tyr Ser Arg Lys Pro Trp
 305 310 315 320
 Asp Asn Gln Gln Gln Thr Val Ala Lys Ile Cys Lys Cys Leu Val Asn
 325 330 335
 Thr His Arg Asp Ser Ala Phe Ile Phe Leu Ser Gln Ser Leu Glu Tyr
 340 345 350
 Ala Lys Asn Ser Arg Ala Ser Leu Arg Lys Cys Ser Val Met Phe Ile
 355 360 365
 Gly Ser Leu Val Pro Cys Met Glu Ser Ile Met Thr Glu Asp Arg Leu
 370 375 380
 Asn Glu Val Lys Ala Ala Leu Asp Asn Leu Arg His Asp Pro Glu Ala
 385 390 395 400
 Ser Val Cys Ile Tyr Ala Ala Gln Val Gln Asp His Ile Leu Ala Ser
 405 410 415
 Cys Trp Gln Asn Ser Trp Leu Pro His Gly Asn Ser Trp Val Cys Tyr
 420 425 430
 Ser Ala Thr Thr His Arg Trp Ser Pro Ser Cys Glu Asn Leu Pro Thr
 435 440 445
 Ser His Gln Arg Arg Ser Trp Ile Met Gln Ala Leu Gly Ser Trp Lys
 450 455 460
 Met Ser Leu Lys Lys
 465

<210> 4943

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 4943

nnacgcgtgg gtgaggaagg gcaggctctag gtaaggctgt cgggtgacttt ggggggtctgc
 60
 agcaaggggc gatggctgcg aagtctacgg ggggtctccaa cctttagtag tgcgcaggaa
 120
 tagggcgaaat ccacttcatt agtgaccagc tcgggcggtt cacgtgcatc acacaaataa
 180
 cttggccttt ttctgcctca gttgggggat ttcttaaag tagaataccc gcgtttccgc
 240
 tgccgtaatt tcctctcagg cgcaattact ctcttcata ttgggtaaca gtagaaggct
 300
 cagtttctct gctcatcaca cggccttcgg cactgtagct ttgggtgggt ggctgcagat
 360
 taattttgta accaccttaa gaaaaatag gaactctaac tccttgccac tcaagaaatg
 420

tcctcccttt cagaatatgc cttccgcatg tctcgtctca gtgcccggct atttggtgaa
 480
 gtcaccaggc ctactaattc caagtctatg aaagtgggta aactgttttag tgaactgccc
 540
 ttggccaaga agaaggagac ttatgattgg tatccaaatc accacactta cgctgaactc
 600
 atgcagacgc tccgatttct tggactctac agagatgagc atcaggattt tatggatgag
 660
 caaaaacgac taaagaagct tcgtggaaag gagaaaccaa agaaaggaga agggaaaaga
 720
 gcagcaaaaa ggaaatagtg ttgggtccctc aagagggaga ctttcttcct cagtggcgga
 780
 gagaagaaag tgcatttatt gtctttccac atattggagg aatgtcatct tcctaaatga
 840
 agttttattg gaggaacaca gtcattctct tggtgaaatc taatccgggt acattgtggc
 900
 tggtttcttg aacacattct aactgtgcaa aattatcttg gccttggccg tgtaaatgtga
 960
 ggtttacctg attctctaata gaaataaata cctaagttat aaaaaaaaaa aaaaaaaaaa
 1020

<210> 4944

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4944

Met	Ser	Ser	Leu	Ser	Glu	Tyr	Ala	Phe	Arg	Met	Ser	Arg	Leu	Ser	Ala
1				5					10					15	
Arg	Leu	Phe	Gly	Glu	Val	Thr	Arg	Pro	Thr	Asn	Ser	Lys	Ser	Met	Lys
			20					25					30		
Val	Val	Lys	Leu	Phe	Ser	Glu	Leu	Pro	Leu	Ala	Lys	Lys	Lys	Glu	Thr
		35					40					45			
Tyr	Asp	Trp	Tyr	Pro	Asn	His	His	Thr	Tyr	Ala	Glu	Leu	Met	Gln	Thr
	50					55				60					
Leu	Arg	Phe	Leu	Gly	Leu	Tyr	Arg	Asp	Glu	His	Gln	Asp	Phe	Met	Asp
65					70				75					80	
Glu	Gln	Lys	Arg	Leu	Lys	Lys	Leu	Arg	Gly	Lys	Glu	Lys	Pro	Lys	Lys
			85					90					95		
Gly	Glu	Gly	Lys	Arg	Ala	Ala	Lys	Arg	Lys						
			100					105							

<210> 4945

<211> 1792

<212> DNA

<213> Homo sapiens

<400> 4945

actagtaaca atgccccacc tctaaatcta gaggacaagc tacagagggg tttgaagggg
 60
 aagcaggaat tctggcaaca gtgtgtctca ttcattctc caggccagga gtaccgcatg
 120
 tacaacacat atgatgtcca cttttatgct tcctttgccc tcatcatgct ctggcccaaa
 180

cttgagctca gcctacagta tgacatggct ctggccactc tcagggagga cctgacacgg
240
cgacgggtacc tgatgagtgg ggtgatggca cctgtgaaaa ggaggaacgt catccccat
300
gatattgggg acccagatga tgaacatgg ctccgcgtca atgcatatgt aatccatgat
360
actgctgatt ggaaggacct gaacctgaag tttgtgctgc aggtttatcg ggactattac
420
ctcacgggtg atcaaaactt cctgaaggac atgtggcctg tgtgtctagt aagggatgca
480
catgcagtgg ccagtgtgcc aggggtatgg ttggtgtctg ggaagagcct agctggttgt
540
tgcctttcct cggtagctag gtcttcaaca tcttggtccc tctctaggct gtgatggaat
600
ctgaaatgaa gtttgacaag gaccatgatg gactcattga aaatggaggc tatgcagacc
660
agacctatga tggatgggtg accacaggcc ccaggtagc gggtaggggt ttccaggagg
720
cctgaggatga gaaactgggc aacaaggat ttagggctc aagaaagaat gactcattgt
780
ctattacacg gcatgggagc agctggagct gccagtctga ccccaaacc catgtccctg
840
atcagtgtt actgtggagg gctgtggctg gcagctgtgg ctgtgatggc ccagatggct
900
gctctgtgtg gggcacagga catccaggat aagttttctt ctatcctcag ccggggccaa
960
gaagcctatg agagactgct gtggaatggg gagttcgggg agcctaagta gtcttaaggc
1020
agctgagagg acaccaggag ccttattttt ctcttctcag actccaggcc gctattacaa
1080
ctatgacagc agctctcggc ctcatctcag tagtggtatg tctgaccagt gtgctggaca
1140
gtggttcctg aaggcctgtg gcctaggaga aggagacact gaggtgtttc ctaccaaca
1200
tgtgttccgt gctctccaaa ctatctttga gctgaacgtc caggcctttg caggaggggg
1260
catgggggct gtgaatggga tgcagcccca tgggtgtccct gataaatcca gtgtgcagtc
1320
tgatgaagtc tgggtgggtg tgggtctacgg gctggcagct accatgatcc aagaggtaat
1380
gcactccttt tcccatctct ccaccatctg tatcctggcc cagaaaactt cctcaaccac
1440
caaatttctt caaggcataa cccaatgcca tcttgtccgt ctataaagcc tccattttt
1500
ccctggtatg cattccagct cctgccttca ggcttctgtc tgtgggtcat agttatctcc
1560
tccacttgct gggagctcct tgaaggcaaa gactctactg cctccatcta tccagtggaa
1620
gtggctcttc agaggggtgc aagttagtat gtatgactgt catctctccc aacagggcct
1680
gacttgggag ggcttcaga cagctgaagg ctgctaccgt accgtgtggg agcgctggg
1740
tctggccttc cagacccag aggcatactg ccagcagcga gtgttccgcg cg
1792

<210> 4946

<211> 197

<212> PRT

<213> Homo sapiens

<400> 4946

```

Thr Ser Asn Asn Ala Pro Pro Leu Asn Leu Glu Asp Lys Leu Gln Arg
 1           5           10           15
Gly Leu Lys Gly Lys Gln Glu Phe Trp Gln Gln Cys Val Ser Phe Ile
      20           25           30
Pro Pro Gly Gln Glu Tyr Arg Met Tyr Asn Thr Tyr Asp Val His Phe
      35           40           45
Tyr Ala Ser Phe Ala Leu Ile Met Leu Trp Pro Lys Leu Glu Leu Ser
      50           55           60
Leu Gln Tyr Asp Met Ala Leu Ala Thr Leu Arg Glu Asp Leu Thr Arg
      65           70           75           80
Arg Arg Tyr Leu Met Ser Gly Val Met Ala Pro Val Lys Arg Arg Asn
      85           90           95
Val Ile Pro His Asp Ile Gly Asp Pro Asp Asp Glu Pro Trp Leu Arg
      100          105          110
Val Asn Ala Tyr Leu Ile His Asp Thr Ala Asp Trp Lys Asp Leu Asn
      115          120          125
Leu Lys Phe Val Leu Gln Val Tyr Arg Asp Tyr Tyr Leu Thr Gly Asp
      130          135          140
Gln Asn Phe Leu Lys Asp Met Trp Pro Val Cys Leu Val Arg Asp Ala
      145          150          155          160
His Ala Val Ala Ser Val Pro Gly Val Trp Leu Val Ser Gly Lys Ser
      165          170          175
Leu Ala Gly Cys Cys Leu Ser Ser Val Pro Arg Ser Ser Thr Ser Trp
      180          185          190
Ser Leu Ser Arg Leu
      195

```

<210> 4947

<211> 2060

<212> DNA

<213> Homo sapiens

<400> 4947

```

nagtactgga tcccatcctg ggtgggggttc tcttagtggt ctgagtgtgc caccaggtct
60
gcaggaggga ggaatccatg caggagggtta gaagagtcag aagattttat tggctgtcct
120
cacttgaata acagccctgt ggcatttttag atctcgagca ctgggatttg tcaattgtca
180
atgtgatgct tggggactgg catattcggt gcaaggggtt tttcacctt ttctgaagct
240
tcctttttcc tctgttttaa agcatatcac agtatgggcc attctctgag tgaagaaagt
300
acagagtgaag agtacacccg aagtgaagg gactcagaca tcttgtgtcc ttgctcagc
360
tggaagacta ctaagcacgt agtttcagtc attcagttga tagacatttg aacacttatg
420

```

gtggtgccta accccaggcc gagtgtgact cattccacct tgcagttaaa gcagtggaaag
480
tgcacgtatg aggcctcaa ctgccttcct gattcagcat agtgttttct tctgggctgc
540
ttactaaga gaaaacctta cagccaatcc aggacctctc tgatcacctc cccagtggat
600
gtagcattgg taaagtggaa ggaccttggt ctgtttgtca gtaggagctg atgtgtgtga
660
acggactcct atctctgctt ctctctttgt gtgacagact ggggtatctt tgcccatcct
720
tgcttagacc agtctagacc ctctggccct ctgcattccc agttccaaat gctagggatg
780
gagaatgtgc ttgggcttgc ataagacggg gctatgcccc tggctctcct cagctgtagt
840
cagcattgct agctgcccac aactcacgcc agtgggtgaa gatgctggtc tcagagaacc
900
agagcttggc agggccctc atacacctct tggagaggta gatgctggtc aactatgcac
960
cattacctgt gagcagagct tactcctctg ccattctctc tccaggccct cagcatcctc
1020
atgctccctc acaacatccc gtccagcctg agcctgtca ccagcatggt ggatgacatg
1080
tggcattacg ctggggacca gtccactgat tttaactggt acaccgccc agccatgctg
1140
gctgccatct acaacacaac agagctgggt atgatgcagg actcctctcc agactttgag
1200
gacacttggc gcttcttgga aaaccgggtt aatgatgcaa tgaacatggg ccacactgcc
1260
aagcaggtaa agtccacagg agaggcactg gtgcaaggac tcatgggtgc agcagtgcac
1320
ctcaagaact tgacangtct aaaccagcgt cgggtgagagg aaggggtata agctacaatg
1380
cctagaagag aatgagcggg cagattgaaa gagctttgaa aagtataagg tgccatccac
1440
ataacctggt gttcacgaga acacactaaa ggactcctga gtcactacca cagccacctg
1500
gaaaccacaa ggcatttgat gctaccgttc tggtcaggga ttgggctgct tcttcagttc
1560
ctaataccag accaagcctc ctgatgcctt tctgcactgc aactgtgtga ttgaaaaatg
1620
agatgttcat ccaagcagtc aagccacaga aaccagcat gtccctgtca caatctcatg
1680
ggcaccttga tcatgtctta accttccctt aaccttgggg ctcccaagcc agagtcaagg
1740
tctgacgcca cctcaagggt acagctcatc tccagcacag cacaggcgtg tgcacacaga
1800
ggtgttcctt gcagccccct ccctctcagg tgcctgaga tgctgtcctt gggagcccc
1860
tcagaaaact gcctcacctg agacaagtgc ctgctggaca gaggtgtgat tccaggcctg
1920
gtgtcacatg acaccagcat gcattgcagg attattagtg tattttgagt ctgtaaaaaat
1980
aataaatatg tttgaagtag ttaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2040

aaaaaaaaaa aaaaaaaaaa

2060

<210> 4948

<211> 127

<212> PRT

<213> Homo sapiens

<400> 4948

```

Ala Glu Leu Thr Pro Leu Pro Phe Ser Leu Gln Ala Leu Ser Ile Leu
 1             5             10             15
Met Leu Pro His Asn Ile Pro Ser Ser Leu Ser Leu Leu Thr Ser Met
      20             25             30
Val Asp Asp Met Trp His Tyr Ala Gly Asp Gln Ser Thr Asp Phe Asn
      35             40             45
Trp Tyr Thr Arg Arg Ala Met Leu Ala Ala Ile Tyr Asn Thr Thr Glu
      50             55             60
Leu Val Met Met Gln Asp Ser Ser Pro Asp Phe Glu Asp Thr Trp Arg
      65             70             75             80
Phe Leu Glu Asn Arg Val Asn Asp Ala Met Asn Met Gly His Thr Ala
      85             90             95
Lys Gln Val Lys Ser Thr Gly Glu Ala Leu Val Gln Gly Leu Met Gly
      100            105            110
Ala Ala Val Thr Leu Lys Asn Leu Thr Xaa Leu Asn Gln Arg Arg
      115            120            125

```

<210> 4949

<211> 1259

<212> DNA

<213> Homo sapiens

<400> 4949

```

nngccggcct gtccccagg ctacttgacg gcgccctgcc accggtgccg ggggctggtg
60
gacaagttaa accaggggat ggtggacacc gcaaagaaga actttggcgg cggaacacg
120
gcttgggagg aaaagacgct gtccaagtac gaggccagcg agattcgctt gctggagatc
180
ctggaggggc tgtgcgagag cagcgacttc gaatgcaatc agatgctaga ggcgaggag
240
gagcacctgg aggcctggtg gctgcagctg aagagcgaat atcctgactt attcgagtgg
300
ttttgtgtga agacactgaa agtgtgctgc tctccaggaa cctacggtcc cgactgtctc
360
gcatgccagg gcggatccca gaggccctgc agcgggaatg gccactgcag cggagatggg
420
agcagacagg gcgacgggtc ctgccggtgc cacatggggt accagggccc gctgtgcact
480
gactgcatgg acggctactt cagctcgctc cggaacgaga cccacagcat ctgcacagcc
540
tgtgacgagt cctgcaagac gtgctcgggc ctgaccaaca gagactgcgg cgagtgtgaa
600
gtgggctggg tgctggacga gggcgctgtg gtggatgtgg acgagtgtgc ggccgagccg
660

```

cctccctgca gcgctgcgca gttctgtaag aacgccaacg gctcctacac gtgcgaagag
 720
 tgtgactcca gctgtgtggg ctgcacaggg gaaggcccag gaaactgtaa agagtgtatc
 780
 tctggctacg cgagggagca cggacagtgt gcagatgtgg acgagtgtc actagcagaa
 840
 aaaaacctgtg tgaggaaaaa cgaaaactgc tacaatactc caggagagcta cgtctgtgtg
 900
 tgtcctgacg gcttcgaaga anacggaaga tgcctgtgtg ccgccggcag aggctgaagc
 960
 cacagaagga gaaagcccga cacagctgcc ctcccgcgaa gacctgtaat gtgccggact
 1020
 tacccttttaa attattcaga aggatgtccc gtggaaaatg tggccctgag gatgccgtct
 1080
 cctgcagtgg acagcggcgg ggagaggctg cctgctctct aacggttgat tctcatttgt
 1140
 cccttaacaa gctgcatttc ttggttggtc ttaaacagac ttgtatatatt tgatacagtt
 1200
 ctttgaata aaattgacca ttgtaggtaa tcaggaggaa aaaaaaaaaa aaaaaaaaaa
 1259

<210> 4950

<211> 318

<212> PRT

<213> Homo sapiens

<400> 4950

Xaa Pro Ala Cys Pro Pro Gly Tyr Leu Thr Ala Pro Cys His Arg Cys
 1 5 10 15
 Arg Gly Leu Val Asp Lys Phe Asn Gln Gly Met Val Asp Thr Ala Lys
 20 25 30
 Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Thr Leu Ser
 35 40 45
 Lys Tyr Glu Ser Ser Glu Ile Arg Leu Leu Glu Ile Leu Glu Gly Leu
 50 55 60
 Cys Glu Ser Ser Asp Phe Glu Cys Asn Gln Met Leu Glu Ala Gln Glu
 65 70 75 80
 Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys Ser Glu Tyr Pro Asp
 85 90 95
 Leu Phe Glu Trp Phe Cys Val Lys Thr Leu Lys Val Cys Cys Ser Pro
 100 105 110
 Gly Thr Tyr Gly Pro Asp Cys Leu Ala Cys Gln Gly Gly Ser Gln Arg
 115 120 125
 Pro Cys Ser Gly Asn Gly His Cys Ser Gly Asp Gly Ser Arg Gln Gly
 130 135 140
 Asp Gly Ser Cys Arg Cys His Met Gly Tyr Gln Gly Pro Leu Cys Thr
 145 150 155 160
 Asp Cys Met Asp Gly Tyr Phe Ser Ser Leu Arg Asn Glu Thr His Ser
 165 170 175
 Ile Cys Thr Ala Cys Asp Glu Ser Cys Lys Thr Cys Ser Gly Leu Thr
 180 185 190
 Asn Arg Asp Cys Gly Glu Cys Glu Val Gly Trp Val Leu Asp Glu Gly
 195 200 205
 Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Pro Pro Pro Cys Ser

210	215	220
Ala Ala Gln Phe Cys Lys Asn Ala Asn Gly Ser Tyr Thr Cys Glu Glu		
225	230	235
Cys Asp Ser Ser Cys Val Gly Cys Thr Gly Glu Gly Pro Gly Asn Cys		240
	245	250
Lys Glu Cys Ile Ser Gly Tyr Ala Arg Glu His Gly Gln Cys Ala Asp		255
	260	265
Val Asp Glu Cys Ser Leu Ala Glu Lys Thr Cys Val Arg Lys Asn Glu		270
	275	280
Asn Cys Tyr Asn Thr Pro Gly Ser Tyr Val Cys Val Cys Pro Asp Gly		285
	290	295
Phe Glu Glu Xaa Gly Arg Cys Leu Cys Ala Ala Gly Arg Gly		300
305	310	315

<210> 4951

<211> 1835

<212> DNA

<213> Homo sapiens

<400> 4951

```

ngagctcttg cgctcagctg gccccacca ctctcacctg ccgcttgggc tcgctcccg
60
cttctctcca gccgtcgact ccacgcctcg cgcctctcgc gagaggagga ggctccacgg
120
agcgacgact tccgccctcc ttagggccgt ggtcccgtag ctaccggctg cgctcgccgtg
180
ggcgacgtgc ccgcttccaa aatggcgcg gggcggtat ctggtgcgct tggccgggcg
240
ggctggaggg tcttcagct gcgatgcctg cccgtggccc gttgcccaca agccctgggtg
300
ccgctgcct tccatgcttc agctgtgggg ctaaggctct cagatgagca gaagcagcag
360
cctcccaact cattttctca gcagcattct gagacacagg gggcagaaaa acctgatcca
420
gagtcttctc attcaccccc caggtataca gaccagggcg gcgaggagga ggaggactat
480
gaaagtgagg agcagttgca gcaccgcatc ctgacggcag cccttgagtt tgtgcccgcc
540
cacgggtgga cagcagaggc gattgcagaa ggagcccagt ctctgggtct ctccagtga
600
gcagccagca tgtttggaag gatgggcagt gagctaatac tgcattttgt gaccagtg
660
aatacccggc tcacacgtgt gctagaagag gagcagaagc tggtagagtt gggccaggcg
720
gagaagagga agacagacca gttcctgagg gatgcagtgg aaaccagact gagaatgctg
780
atccataca ttgagcactg gccccgggcc ctacgcatcc tcatgctccc tcacaacatc
840
ccgtccagcc tgagcctgct caccagcatg gtggatgaca tgtggcatta cgctggggac
900
cagtccactg attttaactg gtacaccgcg cgagccatgc tggctgcat ctacaacaca
960
acagagctgg tgatgatgca ggactcctct ccagactttg aggacacttg gcgcttctg
1020

```

gaaaaccggg ttaatgatgc aatgaacatg ggccacactg ccaagcaggt aaagtccaca
 1080
 ggagaggcac tgggtgcaagg actcatgggt gcagcagtga cgctcaagaa cttgacaggt
 1140
 ctaaaccagc gtcggtgaga ggaaggggta taagctacaa tgcctagaag agaattgagcg
 1200
 gacagattga aagagctttg aaaagtataa ggtgccatcc acataacctg gtgttcacga
 1260
 gaacacacta aaggactcct gagtcactac cacagccacc tggaaaccac aaggcatttg
 1320
 atgctaccgt tctggtcagg gattgggctg cttcttcagt tcctaatacc agaccaagcc
 1380
 tcctgatgcc tttctgcact gcaactgtgt gattgaaaaa tgagatgttc atccaagcag
 1440
 tcaagccaca gaaaccagc atgtccctgt cacaatctca tgggcacctt gatcatgtct
 1500
 taaccttccc ttaaccttgg ggctcccaag ccagagtcaa ggtctgacgc cacctcaagg
 1560
 tgacagctca tctccagcac agcacaggcg tgtgcacaca gaggtgttcc ttgcagcccc
 1620
 ctccctctca ggtgtcctga gatgctgctc ctgggagccc cctcagaaaa ctgcctcacc
 1680
 tgagacaagt gcctgctgga cagaggtgtg attccaggcc tgggtgtcaca tgacaccagc
 1740
 atgcattgca ggattattag tgtattttga gtctgtaaaa ataataaata tgtttgaagt
 1800
 agttaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa
 1835

<210> 4952

<211> 318

<212> PRT

<213> Homo sapiens

<400> 4952

Met Ala Ala Ala Val Ser Gly Ala Leu Gly Arg Ala Gly Trp Arg
 1 5 10 15
 Leu Leu Gln Leu Arg Cys Leu Pro Val Ala Arg Cys Arg Gln Ala Leu
 20 25 30
 Val Pro Arg Ala Phe His Ala Ser Ala Val Gly Leu Arg Ser Ser Asp
 35 40 45
 Glu Gln Lys Gln Gln Pro Pro Asn Ser Phe Ser Gln Gln His Ser Glu
 50 55 60
 Thr Gln Gly Ala Glu Lys Pro Asp Pro Glu Ser Ser His Ser Pro Pro
 65 70 75 80
 Arg Tyr Thr Asp Gln Gly Gly Glu Glu Glu Glu Asp Tyr Glu Ser Glu
 85 90 95
 Glu Gln Leu Gln His Arg Ile Leu Thr Ala Ala Leu Glu Phe Val Pro
 100 105 110
 Ala His Gly Trp Thr Ala Glu Ala Ile Ala Glu Gly Ala Gln Ser Leu
 115 120 125
 Gly Leu Ser Ser Ala Ala Ala Ser Met Phe Gly Arg Met Gly Ser Glu
 130 135 140
 Leu Ile Leu His Phe Val Thr Gln Cys Asn Thr Arg Leu Thr Arg Val

```

145          150          155          160
Leu Glu Glu Glu Gln Lys Leu Val Gln Leu Gly Gln Ala Glu Lys Arg
          165          170          175
Lys Thr Asp Gln Phe Leu Arg Asp Ala Val Glu Thr Arg Leu Arg Met
          180          185          190
Leu Ile Pro Tyr Ile Glu His Trp Pro Arg Ala Leu Ser Ile Leu Met
          195          200          205
Leu Pro His Asn Ile Pro Ser Ser Leu Ser Leu Leu Thr Ser Met Val
          210          215          220
Asp Asp Met Trp His Tyr Ala Gly Asp Gln Ser Thr Asp Phe Asn Trp
225          230          235          240
Tyr Thr Arg Arg Ala Met Leu Ala Ala Ile Tyr Asn Thr Thr Glu Leu
          245          250          255
Val Met Met Gln Asp Ser Ser Pro Asp Phe Glu Asp Thr Trp Arg Phe
          260          265          270
Leu Glu Asn Arg Val Asn Asp Ala Met Asn Met Gly His Thr Ala Lys
          275          280          285
Gln Val Lys Ser Thr Gly Glu Ala Leu Val Gln Gly Leu Met Gly Ala
          290          295          300
Ala Val Thr Leu Lys Asn Leu Thr Gly Leu Asn Gln Arg Arg
305          310          315

```

<210> 4953
<211> 355
<212> DNA
<213> Homo sapiens

```

<400> 4953
gtgcacgcag gaaatggcgg gtgggaggca ggacaggaga gcccaggcct ggacaccact
60
gtcagcctgg ggatgcttgg cggcttctcc agtcctggga gcaggcatca cctggccgcg
120
ggtgccccct ggtggcagct tgaaggaagg acgggcagtg ggtcgcagcc agcggggacc
180
taccgcaaa aacgcacata aaagctggaa tcagcttgtt acagctgcag gtccctctcg
240
tccgatttgg atagaccctc ttgggaccca ctgcaccagg gaaccccaaa tgcagctcag
300
cagcatggga ggagccctgt ctgctggggg tgtctgggat cgtcggagag aggct
355

```

<210> 4954
<211> 114
<212> PRT
<213> Homo sapiens

```

<400> 4954
Met Ala Gly Gly Arg Gln Asp Arg Arg Ala Gln Ala Trp Thr Pro Leu
1          5          10          15
Ser Ala Trp Gly Cys Leu Ala Ala Ser Pro Val Leu Gly Ala Gly Ile
          20          25          30
Thr Trp Pro Arg Val Pro Pro Gly Ser Leu Lys Glu Gly Arg Ala
          35          40          45
Val Gly Arg Ser Gln Arg Gly Pro Thr Pro Gln Asn Ala His Lys Ser

```

50 55 60
 Trp Asn Gln Leu Val Thr Ala Ala Gly Pro Ser Arg Pro Ile Trp Ile
 65 70 75 80
 Asp Pro Leu Gly Thr His Cys Thr Arg Glu Pro Gln Met Gln Leu Ser
 85 90 95
 Ser Met Gly Gly Ala Leu Ser Ala Gly Gly Val Trp Asp Arg Arg Arg
 100 105 110
 Glu Ala

<210> 4955
 <211> 364
 <212> DNA
 <213> Homo sapiens

<400> 4955
 agatctaagg ccctcgggag agatgggaac tgagcacctg ggtcttagac cggaggagca
 60
 aactgcaaga caggggtggcc ggggacacca gcctccgccc ttctgtgaca taaggacaag
 120
 agctcagcct gcccggaac aactctgggc aagagatgtg gaaagaaaga gctcangggg
 180
 gggcacgcat ggcacctgg ggggacatct gagggcaccc ccaccacta ttcctccctc
 240
 caaggtggcc tctgagtgtg aaggcagggg gaagcagaca cctgcccctc actctccctc
 300
 cctaccacat agctaccggg tggggggcgt ccctgggatg attcctgagg gcaggatcca
 360
 gggg
 364

<210> 4956
 <211> 114
 <212> PRT
 <213> Homo sapiens

<400> 4956
 Met Gly Thr Glu His Leu Gly Leu Arg Pro Glu Glu Gln Thr Ala Arg
 1 5 10 15
 Gln Gly Gly Arg Gly His Gln Pro Pro Pro Phe Cys Asp Ile Arg Thr
 20 25 30
 Arg Ala Gln Pro Ala Gln Glu Gln Leu Trp Ala Arg Asp Val Glu Arg
 35 40 45
 Lys Ser Ser Xaa Gly Gly Thr His Gly Ile Leu Gly Gly His Leu Arg
 50 55 60
 Ala Pro Pro Pro Thr Ile Pro Pro Ser Lys Val Ala Ser Glu Cys Glu
 65 70 75 80
 Gly Arg Gly Lys Gln Thr Pro Ala Pro His Ser Pro Ser Leu Pro His
 85 90 95
 Ser Tyr Arg Val Gly Gly Val Pro Gly Met Ile Pro Glu Gly Arg Ile
 100 105 110
 Gln Gly

<210> 4957
 <211> 872
 <212> DNA
 <213> Homo sapiens

<400> 4957
 nttcatattt tttttttttt ttggacacaa catgatatta ggctttattt gaatttaaaa
 60
 tcttgattcc atccaggac attttttacc gaagcgtctc agagactggc tcagggtatt
 120
 tcttgacaag actgtacagg gcttctcatc atacacaaac cctccacagc ccacggctcc
 180
 aacccacagc acctcctgca gtccctggagg gaaaaggagc agtaacatga agtgtctgaa
 240
 gatccatttc acctcttttc catgtgaatc atgacgcttt caatgcattt cttgacagga
 300
 ttctattttg aaagaatgat gctcaatctg taccttttat gcttcttggt tcttctccat
 360
 caataatagc tcagtcaact gcttgtcaga gacacttagc tgetgacagg tcctcataac
 420
 ctgactcagg taaactgcc aagatgctt gcacaggatg ctgtcactct tccgtagcac
 480
 tgagaatgca aatgcaggac atgaacagta atgacaagaa gccaaacatg tgtatgtttt
 540
 actggaactt ccaaggacct ggtaaacacg ccttccactg ggtgatgaga ttaaggtgat
 600
 ggactgtcga tcaactaggt ccaaggcctg ggtggctgat gagccaaaga gaaacttcag
 660
 cgataacaga tattcatcag gaattcggtc ccgtacttcg cgcgctctcc tgcaccgccg
 720
 ccgcatctc gctcaggagc tctccacaa ccgcccggca ctacggccat cgcgccgcag
 780
 gacacgcct ccacgacgcg gaccgcgcga cgctccagct gactgcgcct acctgtggag
 840
 gatcctgacc ccccgccggc ctcgttccga at
 872

<210> 4958
 <211> 51
 <212> PRT
 <213> Homo sapiens

<400> 4958
 Gln Ile Phe Ile Arg Asn Ser Val Pro Tyr Phe Ala Arg Ser Pro Ala
 1 5 10 15
 Pro Pro Pro Pro Ser Arg Ser Gly Ala Pro Pro Gln Pro Pro Ala Thr
 20 25 30
 Thr Ala Ile Ala Pro Gln Asp Thr Pro Ser Thr Thr Arg Thr Ala Arg
 35 40 45
 Arg Ser Ser
 50

<210> 4959
 <211> 449

<212> DNA

<213> Homo sapiens

<400> 4959

acgcgtgtca aggctgggaa tgcaaattggt agtggtgggt tcctttgctg ggggttgatg
 60
 cagtgggttg gggggcttcc atttgagtt gagggccagg tgtttgggtc cttccatgtg
 120
 gcagggataa agaggagagc tggcatctgg agtcatgata tgtctgagag gcagtgcctc
 180
 cggccaccgt aggatggagg ccagcttcca gccctggctg atgggggaga agcagcgaat
 240
 tctccagatg tggtatggca gacctttgga agattcactc ggctccact taacctgtg
 300
 agaccaaagg ccacagcccc atgtgttctg cgtgctgttg aacatgtttg tatttcattg
 360
 gcgtggatga taatttggtt gaaaggagag atggtcacca gtggactcag tttaggaagg
 420
 cacaaggtc aaccctttcc gtttctaga
 449

<210> 4960

<211> 115

<212> PRT

<213> Homo sapiens

<400> 4960

Met	Phe	Asn	Ser	Thr	Gln	Asn	Thr	Trp	Gly	Cys	Gly	Leu	Trp	Ser	His
1				5					10					15	
Lys	Val	Lys	Trp	Arg	Pro	Ser	Glu	Ser	Ser	Lys	Gly	Leu	Pro	Tyr	His
			20				25						30		
Ile	Trp	Arg	Ile	Arg	Cys	Phe	Ser	Pro	Ile	Ser	Gln	Gly	Trp	Lys	Leu
		35					40					45			
Ala	Ser	Ile	Leu	Arg	Trp	Pro	Glu	Ala	Leu	Pro	Leu	Arg	Gln	Ile	Met
	50					55					60				
Thr	Pro	Asp	Ala	Ser	Ser	Pro	Leu	Tyr	Pro	Cys	His	Met	Glu	Gly	Pro
65					70					75				80	
Lys	His	Leu	Ala	Leu	Asn	Cys	Lys	Trp	Lys	Pro	Pro	Gln	Pro	Leu	His
			85						90					95	
Gln	Pro	Pro	Ala	Lys	Glu	Thr	Thr	Thr	Thr	Ile	Cys	Ile	Pro	Ser	Leu
			100					105					110		
Asp	Thr	Arg													
			115												

<210> 4961

<211> 4737

<212> DNA

<213> Homo sapiens

<400> 4961

gcggccgccca caccagcac cacaggcacc aagtccaaca cgccacatc ctccgtgccc
 60
 tcggccgccg tcacaccct caacgagagc ctgcagcccc tgggggacta tggcgtgggg
 120

tccaagaaca gcaagcgtgc ccgggagaag cgcgacagcc gcaacatgga agtacaggtc
180
acccaggaga tgcgcaacgt cagtataggc atgggcagca gtgacgagtg gtctgatgtt
240
caagacatta ttgactccac gccagagctg gacatgtgtc cagagacccg cctggaccgc
300
acaggaagca gccaaccca gggcatcgtg aacaaagctt tcggcatcaa caccgactcc
360
ctgtaccatg agctgtcgac ggcaggggtc gaggtcatcg gggatgtgga cgaagggggc
420
gacctcctag gggagttctc aggaatgggc aaagaagtgg ggaatctgct actggaaaac
480
tcacagcttc tggaaaccaa aaacgccttg aatgtggtga agaatgacct gattgccaa
540
gtcgaccagc tgtccgggga gcaggaggtg ctgaggggag agttggaggc tgctaagcag
600
gccaaagtca agctggaaaa ccgtatcaag gagctggaag aggaactgaa aagagtgaag
660
tccgaggcca tcatcgcccg ccgtgaaccc aaagaagagg cggaggatgt aagcagctat
720
ctctgtacag aatcggacaa aatccccatg gcccagcgcc gccgcttcac gcgggtggag
780
atggcccgtg tgctcatgga gcggaaccag tacaaggagc ggctgatgga gctgcaggag
840
gctgtgcggt ggactgagat gatcagagcg tcccagagag acccatccgt ccaggagaag
900
aagaagtca ccatctggca gttcttcagc cgcctcttca gctcttctc cagccccct
960
ccggccaagc gccctatcc ctccgtgaac atccactaca agtcacccac cactgccggc
1020
ttcagccagc gccgcaacca tgccatgtgc ccgatctcgg caggcagccg gccctggaa
1080
ttcttccctg acgacgactg cagctcctcc gcccgtcgag agcagaagcg cgagcagtac
1140
cgccagggtg gtgagcacgt gcgtaacgac gacggccgtc tgcaggcctg cggctggagc
1200
ctgcccgcga agtacaagca gctgagtcac aacggggggc aggaggacac gcggatgaag
1260
aacgtgccgg tgccggtgta ctgccgcct ctggtggaga aggacccac catgaagctg
1320
tggtgtgccg cgggcgtcaa cctgagcggg tggaggcca atgaggacga cgctgggaat
1380
ggagtcaagc cagcgccagg ccgcatccc ctgacctgag accggaagg agacggcgag
1440
cccaagagcg ccacgcgtc tcccagaag aagaaggcca aggagctccc tgaaatggac
1500
gccacctcca gccgggtgtg gatcctgacc agcaccctga ccaccagcaa ggtggtgatc
1560
atcgacgcca accagccggg caggtggtg gaccagttca ccgtctgcaa cgcgcacgtg
1620
ctgtgcatct ccagcatccc cgcggccagc gacagcgact accctcccgg ggagatgttc
1680
ctggacagcg acgtgaaccc agaggacccg ggcgcagatg gcgtgctggc cggtatcacc
1740

ctggtgggct gtgccacccg ctgcaacgtg ccgcggagca actgctcctc ccgaggggac
1800
accccaagtgc tagacaaggg gcagggggag gtggccacca tcgccaacgg gaaggtcaac
1860
ccgtcccagt ccacagagga ggccacagag gccacggagg tgccagacc cggggccagc
1920
gagccagaga cagccacatt gcggcccggg cctctcacag agcacgtctt cactgaccca
1980
gccccgaccc cgtcctctgg ccccagcct ggcagcgaga acgggcccaga gcctgacagc
2040
agcagcacac ggccagagcc agagcccagc ggggacccca cgggagcagg cagcagtgt
2100
gcacccacca tgtggctggg agcccagaac ggctggctct atgtgcactc ggctgtggcc
2160
aactggaaga agtgcctgca ctccatcaag ctgaaggatt ctgtgctgag cctggtgcat
2220
gtcaaaggcc gtgtgctggt ggctctggcg gacgggaccc tggccatctt ccaccgtggt
2280
gaagatggcc agtgggatct gagcaactat cacctaattg acctgggcca cccgcaccac
2340
tccatccgct gcatggctgt tgtgtacgac cgcgtgtggt gtggctacaa gaacaagggtg
2400
cacgtcatcc agcccaagac catgcagata gagaagtcac ttgacgcca cccgcggcgg
2460
gagagccagg tgcggcagct ggctgggacg ggcgatggcg tatgggtgtc catccgcctg
2520
gactccaccc tgaggctcta ccatgcacac acgcaccagc atctacagga cgtggacatt
2580
gagccctacg tcagcaagat gctaggcact ggcaagctgg gtttctcctt cgtacgcac
2640
acggccctgc ttgtcgcggg cagccggctc tgggtgggca ccggcaacgg agtggtcac
2700
tccatcccc tgacagagac tgtggctcctg caccgaggcc agctcctggg gctccgagcc
2760
aataagacat cccccacctc tggggagggc gcccgtcccg ggggcatcat ccacgtgtat
2820
ggcgatgaca gcagtgcag ggcgccagc agcttcatcc cctactgctc catggcccag
2880
gccagctat gcttccatgg gcaccgcgat gccgtgaagt tctttgtctc ggtgccaggg
2940
aacgtgctgg ccaccctgaa tggcagtgtg ctggacagcc cagccgaggg ccctgggcca
3000
gctgcccctg cctcggaggt cgagggccag aagctgcgga acgtgctggt gctgagcggc
3060
ggggagggct acatcgactt ccgcattgga gacggagagg acgacgagac ggaggagggc
3120
gcaggggaca tgagccaggt gaagcccgtg ctgtccaagg cagagcgag tcacatcatc
3180
gtgtggcagg tgtcctacac ccccgagtga agctgctgcc ctgectggcc cgacctgtac
3240
ataggacccc cgaccacctg acccccgcgc ggcccgcggg gtagccagcc aggcgcgcgc
3300
gcccctcttc taacctctca acctgcagct ttcacctgag tctggcccct ccagcgggca
3360

gggagtgcgg ggatgcggat cagctgggag gaggagggga ggggtgcttc cacccgaggg
3420
gaagatgctc tcgggacagt ttcccgggca gctcctggcc agcttccagc ccagagtcct
3480
caagtccagg gcaccttggg cccagcgcag gcagaatccg aggtggctct ggctctaccc
3540
tgggcctcct actccccagc acccctggag gaggcagggg ctccccgccg ccgaggctgc
3600
ctgccctggg cccacctccg catgctgctc atggggccac cctgcctcct gggccctcac
3660
tctgcctagg ggagctgggc caggcactag cctttgcca gggagggtgg cctcaggctg
3720
cccagggtgc tgcaccccag ccggccttct ctggggcctc ccgctcgtca agcctctatc
3780
ctgtctgtcc ccaccccagc tgtccctgc ccagggaact ggcataaaag cacgaggccc
3840
ggctccctgg ggcagctgct tgagaacaga gactgctacc ccatactgcc catgcaggca
3900
ggctcttgcc agccccgttc tgacccgtgt cccccaggc tctgcctggg cagaagactc
3960
accttgagg agtgggccct ggagtcctgt ccctcccaga agccccagg gtgggatttc
4020
tcaggctgcc agggcaggcc caggcctcag gaagaagggg agggccctgg cctctccggg
4080
atcagtccta ggacacaggc tcagcctcag gttgatggg gatgatgtgc tcccggggcc
4140
tgccctctgc acggggctcc acggagccca gctcccagac acgctactaa gtgcctaggg
4200
ttgcccgctg tggcctgctc ccaggagca acagagaggc caccaagcag agggccgtgg
4260
ggctgaggat ggagccgccc ccagccgact ccaagcccgc agagggcaga cgccacctg
4320
gactgctctc cctgcccagc tgggcctctc tggcctattc ctaccttcca ggcccaactgc
4380
actcctgtct gggaggccct tatgagggca gcccagcccc cgcacccacc cccaaccaga
4440
gaagcacaga tcttggggag ctgcccaca agccccgctg gccaccgagg gctgcagccg
4500
ctgcgctgcc ggcttctccc caccacctg ccacctccac tgtgatgtat gtccgctccc
4560
tcgtctgttc cccaggatc tcgaagtgc tccgggctga gcagtggggc ggctggggga
4620
ggggtgacga ttctcctcag gctttggccc tgcaagcaaa cccacatatc tgctctgtat
4680
gtaataaatg tcttaacgtc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
4737

<210> 4962

<211> 1069

<212> PRT

<213> Homo sapiens

<400> 4962

Ala Ala Ala Thr Pro Ser Thr Thr Gly Thr Lys Ser Asn Thr Pro Thr

```

1           5           10           15
Ser Ser Val Pro Ser Ala Ala Val Thr Pro Leu Asn Glu Ser Leu Gln
20           25           30
Pro Leu Gly Asp Tyr Gly Val Gly Ser Lys Asn Ser Lys Arg Ala Arg
35           40           45
Glu Lys Arg Asp Ser Arg Asn Met Glu Val Gln Val Thr Gln Glu Met
50           55           60
Arg Asn Val Ser Ile Gly Met Gly Ser Ser Asp Glu Trp Ser Asp Val
65           70           75           80
Gln Asp Ile Ile Asp Ser Thr Pro Glu Leu Asp Met Cys Pro Glu Thr
85           90           95
Arg Leu Asp Arg Thr Gly Ser Ser Pro Thr Gln Gly Ile Val Asn Lys
100          105          110
Ala Phe Gly Ile Asn Thr Asp Ser Leu Tyr His Glu Leu Ser Thr Ala
115          120          125
Gly Ser Glu Val Ile Gly Asp Val Asp Glu Gly Ala Asp Leu Leu Gly
130          135          140
Glu Phe Ser Gly Met Gly Lys Glu Val Gly Asn Leu Leu Leu Glu Asn
145          150          155          160
Ser Gln Leu Leu Glu Thr Lys Asn Ala Leu Asn Val Val Lys Asn Asp
165          170          175
Leu Ile Ala Lys Val Asp Gln Leu Ser Gly Glu Gln Glu Val Leu Arg
180          185          190
Gly Glu Leu Glu Ala Ala Lys Gln Ala Lys Val Lys Leu Glu Asn Arg
195          200          205
Ile Lys Glu Leu Glu Glu Glu Leu Lys Arg Val Lys Ser Glu Ala Ile
210          215          220
Ile Ala Arg Arg Glu Pro Lys Glu Glu Ala Glu Asp Val Ser Ser Tyr
225          230          235          240
Leu Cys Thr Glu Ser Asp Lys Ile Pro Met Ala Gln Arg Arg Arg Phe
245          250          255
Thr Arg Val Glu Met Ala Arg Val Leu Met Glu Arg Asn Gln Tyr Lys
260          265          270
Glu Arg Leu Met Glu Leu Gln Glu Ala Val Arg Trp Thr Glu Met Ile
275          280          285
Arg Ala Ser Arg Glu His Pro Ser Val Gln Glu Lys Lys Lys Ser Thr
290          295          300
Ile Trp Gln Phe Phe Ser Arg Leu Phe Ser Ser Ser Ser Ser Pro Pro
305          310          315          320
Pro Ala Lys Arg Pro Tyr Pro Ser Val Asn Ile His Tyr Lys Ser Pro
325          330          335
Thr Thr Ala Gly Phe Ser Gln Arg Arg Asn His Ala Met Cys Pro Ile
340          345          350
Ser Ala Gly Ser Arg Pro Leu Glu Phe Phe Pro Asp Asp Asp Cys Thr
355          360          365
Ser Ser Ala Arg Arg Glu Gln Lys Arg Glu Gln Tyr Arg Gln Val Arg
370          375          380
Glu His Val Arg Asn Asp Asp Gly Arg Leu Gln Ala Cys Gly Trp Ser
385          390          395          400
Leu Pro Ala Lys Tyr Lys Gln Leu Ser Pro Asn Gly Gly Gln Glu Asp
405          410          415
Thr Arg Met Lys Asn Val Pro Val Pro Val Tyr Cys Arg Pro Leu Val
420          425          430
Glu Lys Asp Pro Thr Met Lys Leu Trp Cys Ala Ala Gly Val Asn Leu

```

435 440 445
 Ser Gly Trp Arg Pro Asn Glu Asp Asp Ala Gly Asn Gly Val Lys Pro
 450 455 460
 Ala Pro Gly Arg Asp Pro Leu Thr Cys Asp Arg Glu Gly Asp Gly Glu
 465 470 475 480
 Pro Lys Ser Ala His Ala Ser Pro Glu Lys Lys Lys Ala Lys Glu Leu
 485 490 495
 Pro Glu Met Asp Ala Thr Ser Ser Arg Val Trp Ile Leu Thr Ser Thr
 500 505 510
 Leu Thr Thr Ser Lys Val Val Ile Ile Asp Ala Asn Gln Pro Gly Thr
 515 520 525
 Val Val Asp Gln Phe Thr Val Cys Asn Ala His Val Leu Cys Ile Ser
 530 535 540
 Ser Ile Pro Ala Ala Ser Asp Ser Asp Tyr Pro Pro Gly Glu Met Phe
 545 550 555 560
 Leu Asp Ser Asp Val Asn Pro Glu Asp Pro Gly Ala Asp Gly Val Leu
 565 570 575
 Ala Gly Ile Thr Leu Val Gly Cys Ala Thr Arg Cys Asn Val Pro Arg
 580 585 590
 Ser Asn Cys Ser Ser Arg Gly Asp Thr Pro Val Leu Asp Lys Gly Gln
 595 600 605
 Gly Glu Val Ala Thr Ile Ala Asn Gly Lys Val Asn Pro Ser Gln Ser
 610 615 620
 Thr Glu Glu Ala Thr Glu Ala Thr Glu Val Pro Asp Pro Gly Pro Ser
 625 630 635 640
 Glu Pro Glu Thr Ala Thr Leu Arg Pro Gly Pro Leu Thr Glu His Val
 645 650 655
 Phe Thr Asp Pro Ala Pro Thr Pro Ser Ser Gly Pro Gln Pro Gly Ser
 660 665 670
 Glu Asn Gly Pro Glu Pro Asp Ser Ser Ser Thr Arg Pro Glu Pro Glu
 675 680 685
 Pro Ser Gly Asp Pro Thr Gly Ala Gly Ser Ser Ala Ala Pro Thr Met
 690 695 700
 Trp Leu Gly Ala Gln Asn Gly Trp Leu Tyr Val His Ser Ala Val Ala
 705 710 715 720
 Asn Trp Lys Lys Cys Leu His Ser Ile Lys Leu Lys Asp Ser Val Leu
 725 730 735
 Ser Leu Val His Val Lys Gly Arg Val Leu Val Ala Leu Ala Asp Gly
 740 745 750
 Thr Leu Ala Ile Phe His Arg Gly Glu Asp Gly Gln Trp Asp Leu Ser
 755 760 765
 Asn Tyr His Leu Met Asp Leu Gly His Pro His His Ser Ile Arg Cys
 770 775 780
 Met Ala Val Val Tyr Asp Arg Val Trp Cys Gly Tyr Lys Asn Lys Val
 785 790 795 800
 His Val Ile Gln Pro Lys Thr Met Gln Ile Glu Lys Ser Phe Asp Ala
 805 810 815
 His Pro Arg Arg Glu Ser Gln Val Arg Gln Leu Ala Trp Ile Gly Asp
 820 825 830
 Gly Val Trp Val Ser Ile Arg Leu Asp Ser Thr Leu Arg Leu Tyr His
 835 840 845
 Ala His Thr His Gln His Leu Gln Asp Val Asp Ile Glu Pro Tyr Val
 850 855 860
 Ser Lys Met Leu Gly Thr Gly Lys Leu Gly Phe Ser Phe Val Arg Ile

```
<210> 4963
<211> 1575
<212> DNA
<213> Homo sapiens
```

```

<400> 4963
ctcgaggact tctacggccc ctgcgccaag accagtgaga agggggcccta cttcttgacg
60
gagtacagca ctcaccagct cttcagccag ctcacgctgc tacagcagga gttgtttcaa
120
aagtgccacc cggtcactt cctgaactca cggggccttg gcgtcatgga caagagcact
180
gccatcccca aagccagctc ttctgagtct ctttcggcca aaacctgcag cttatttctg
240
cccaattacg ttcaggacaa gtatctgtta cagcttctaa gaaacgcaga tgacgtcagc
300
acctgggttg ctgcagagat tgtgaccagc cacacctcca agctgcaggt gaacttgctg
360
tccaaatttn tgctgattgc aaaatcttgc tatgagcaga gaaacttcgc gacagccatg
420
cagatcctga gcgggctgga gcacctggcc gtgaggcagt cccctgcctg gagaattctg
480
cctgcaaaaga tagcagaggt catggaggag ctgaaagcgg tggagggtctt cctgaagagc
540
gacagcctgt gtctgatgga agggcggcgc ttccgggcgc agcccacct gccctcggcc
600
cacctcctgg ccatgcacat ccagcagctg gagacaggcg gcttcaccat gaccaacggg
660

```


gccacaggt ggagcaagct caggaacatc gcaaaggtgg tgagccaggt gcacgcgttc
 720
 caggagaacc cttacacctt cagccccgac cccaagctcc agtcgtacct caagcagagg
 780
 attgcccgtc tcagcgggtc cgacatttcc acactcgccg cagatagcag ggccaacttc
 840
 caccaggtct ccagcgagaa gcactcacgg aagattcagg acaagctacg gaggatgaag
 900
 gctacattcc agtagccgag ctcgggcctg gtgtggaatt ccagatccga atccgactgt
 960
 gggggggcggg ctgggaggtg ggagccgcgt ctcaggcccg gccgttatca agggccctcc
 1020
 gccccgaac cctggggagc tggaccagga ggtggaggct caggggaccc catggggaca
 1080
 ggcagagctg gtctcctccc agcagacgga gccaggacgg gcacaagagt cttggagggt
 1140
 tgcgtgtttc tgctagaatt aaaaagttaa atttaaaaat gaaaatgaaa gacagcttcc
 1200
 caggagtttt gtgcctgtct gcgcctctca cacacagata agtggctctt acccagctct
 1260
 cagtgactcc cccacaaaac agcaacagcc tccaccgcca actcaacaaa cttcagagta
 1320
 gtcctccctc gagcaggttt ctgagccagc ctcggttggc tgagcaacga agggccaaag
 1380
 ctgacctctg agtggccaac tgcagctccc agggactccg agacctccg tccgagaccc
 1440
 tgctggggtt cccccccac aaccagacc cagaaccgct ctcccttcc ctgcccagt
 1500
 cccctcttcc ccagcccaga ccccaggtg cccaaggcct gctgctggag caggcacctt
 1560
 gggctggggc tgctc
 1575

<210> 4964

<211> 304

<212> PRT

<213> Homo sapiens

<400> 4964

Leu	Glu	Asp	Phe	Tyr	Gly	Pro	Cys	Ala	Lys	Thr	Ser	Glu	Lys	Gly	Pro
1				5					10					15	
Tyr	Phe	Leu	Thr	Glu	Tyr	Ser	Thr	His	Gln	Leu	Phe	Ser	Gln	Leu	Thr
		20					25						30		
Leu	Leu	Gln	Gln	Glu	Leu	Phe	Gln	Lys	Cys	His	Pro	Val	His	Phe	Leu
		35					40					45			
Asn	Ser	Arg	Ala	Leu	Gly	Val	Met	Asp	Lys	Ser	Thr	Ala	Ile	Pro	Lys
		50				55					60				
Ala	Ser	Ser	Ser	Glu	Ser	Leu	Ser	Ala	Lys	Thr	Cys	Ser	Leu	Phe	Leu
65				70					75					80	
Pro	Asn	Tyr	Val	Gln	Asp	Lys	Tyr	Leu	Leu	Gln	Leu	Leu	Arg	Asn	Ala
			85					90					95		
Asp	Asp	Val	Ser	Thr	Trp	Val	Ala	Ala	Glu	Ile	Val	Thr	Ser	His	Thr
		100					105					110			
Ser	Lys	Leu	Gln	Val	Asn	Leu	Leu	Ser	Lys	Phe	Xaa	Leu	Ile	Ala	Lys

```

      115      120      125
Ser Cys Tyr Glu Gln Arg Asn Phe Ala Thr Ala Met Gln Ile Leu Ser
      130      135      140
Gly Leu Glu His Leu Ala Val Arg Gln Ser Pro Ala Trp Arg Ile Leu
145      150      155
Pro Ala Lys Ile Ala Glu Val Met Glu Glu Leu Lys Ala Val Glu Val
      165      170      175
Phe Leu Lys Ser Asp Ser Leu Cys Leu Met Glu Gly Arg Arg Phe Arg
      180      185      190
Ala Gln Pro Thr Leu Pro Ser Ala His Leu Leu Ala Met His Ile Gln
      195      200      205
Gln Leu Glu Thr Gly Gly Phe Thr Met Thr Asn Gly Ala His Arg Trp
      210      215      220
Ser Lys Leu Arg Asn Ile Ala Lys Val Val Ser Gln Val His Ala Phe
225      230      235
Gln Glu Asn Pro Tyr Thr Phe Ser Pro Asp Pro Lys Leu Gln Ser Tyr
      245      250      255
Leu Lys Gln Arg Ile Ala Arg Phe Ser Gly Ala Asp Ile Ser Thr Leu
      260      265      270
Ala Ala Asp Ser Arg Ala Asn Phe His Gln Val Ser Ser Glu Lys His
      275      280      285
Ser Arg Lys Ile Gln Asp Lys Leu Arg Arg Met Lys Ala Thr Phe Gln
      290      295      300

```

<210> 4965

<211> 1474

<212> DNA

<213> Homo sapiens

<400> 4965

```

gattcttcat atttccgtgg ctgtttacgg gaagaaggag gccatttcca catgtggaag
60
aaagcattca aaggagcag caggtctctc cccacgcctt gcagagacgg tcaggagaga
120
ccccaaagcag agagcacgct gctcagggac agagctgggc ttgtgaccat gtgtcgccct
180
ggcgctgtgc ttccaggtcc tcgcctggag ggcagctgta ttctcagaga gccagccttt
240
cctacagccc ttttagtgac caggggcatt tcctaccctc acttgatctc aaagccacgg
300
tcggtaggaa caaaaagggtg ggttttctag caggctggaa atggccagca ggggagcaag
360
ccggcgctgc ctgggagtgt cgggtggtca ggtcaggctg tagatgtatc ctgtagactc
420
aaggccgctt ctcaggagtc cagagtccca taaaccacca tgagtgcctt cctgggatct
480
cattctgctc agaaactcat tgattttact ctgaagcacc cacgaatgac agattcccag
540
gaggggcaga gaaggctgag cggcaccacg tggggctggc cgcggttgtt gggcatgagc
600
acgcctggag aggccatggg gctggtgaca agctctggcc agaagacccc aagaaggctc
660
gatcctgggg tctgatccag gcctgcggca ctgggtccta ggcagactgt ctgcctggtg
720

```

agacgtggaa ggagccagtg tccgcagccg tctcaggacg tcagagagct cgggtggcctg
 780
 tctccagcag catgctctcc agatgcagcc tactgtcgct ctccacatag ggctgggtgca
 840
 gccacatgga caggtagctc aggggtgaggt cgggatcccc ggtgtgggca agctccttgg
 900
 ccaccgtgcg cttcaggagc agctccttcc tgtacatctc caagagctta tgcgaaacct
 960
 catagaaatg ggttgtaggc cacgtgtgga acagaggggg tcgtttactc tcctccccat
 1020
 aatggtagtt ttctagttca caaattccct tggtagttga agacagcttt tccattttca
 1080
 cctgtatttt ggtcaaccca tccaagggtg cctgcagttc ctcacacagc ttctccagtt
 1140
 cctcgttata ttccagacac accttttctt cattttcctt cgaggctggg ctgctgctgt
 1200
 ctagtcttat cttgtcttta ttcaataaac tgattttcaa gttggcaata ttatttgcag
 1260
 tggtaaaacc tgcattcattg agggtttccc acttcaggat taaattgtgc caatcagccg
 1320
 cattgtcctt aatttttctt gcactgacag ataagacagg tttctctggc gttacagttc
 1380
 caagagtctt tgcttccata aggtccacag atatccgtag aaggagctgc tcctgaagcg
 1440
 cacggtggac aggtagctca gggtagggtc gcga
 1474

<210> 4966

<211> 212

<212> PRT

<213> Homo sapiens

<400> 4966

Met	Glu	Ala	Lys	Thr	Leu	Gly	Thr	Val	Thr	Pro	Arg	Lys	Pro	Val	Leu
1			5						10					15	
Ser	Val	Ser	Ala	Arg	Lys	Ile	Lys	Asp	Asn	Ala	Ala	Asp	Trp	His	Asn
			20					25					30		
Leu	Ile	Leu	Lys	Trp	Glu	Thr	Leu	Asn	Asp	Ala	Gly	Phe	Thr	Thr	Ala
		35					40					45			
Asn	Asn	Ile	Ala	Asn	Leu	Lys	Ile	Ser	Leu	Leu	Asn	Lys	Asp	Lys	Ile
		50				55					60				
Glu	Leu	Asp	Ser	Ser	Ser	Pro	Ala	Ser	Lys	Glu	Asn	Glu	Glu	Lys	Val
65					70				75					80	
Cys	Leu	Glu	Tyr	Asn	Glu	Glu	Leu	Glu	Lys	Leu	Cys	Glu	Glu	Leu	Gln
			85					90						95	
Ala	Thr	Leu	Asp	Gly	Leu	Thr	Lys	Ile	Gln	Val	Lys	Met	Glu	Lys	Leu
		100					105					110			
Ser	Ser	Thr	Thr	Lys	Gly	Ile	Cys	Glu	Leu	Glu	Asn	Tyr	His	Tyr	Gly
		115				120					125				
Glu	Glu	Ser	Lys	Arg	Pro	Pro	Leu	Phe	His	Thr	Trp	Pro	Thr	Thr	His
		130				135					140				
Phe	Tyr	Glu	Val	Ser	His	Lys	Leu	Leu	Glu	Met	Tyr	Arg	Lys	Glu	Leu
145					150				155					160	
Leu	Leu	Lys	Arg	Thr	Val	Ala	Lys	Glu	Leu	Ala	His	Thr	Gly	Asp	Pro

```
<210> 4969
<211> 2911
<212> DNA
<213> Homo sapiens
```

<400> 4969

ccaanntcac tttctaccct gagccctacc cgctcgtcta tggccccccag ctcccttgccg
60
cctaccctta caacttcagt aacttgggcg ctcccggttg ctctcaacat ggtcctacct
120
gatgagaagg gtgcgggggc ccttcccttc ctaccagggg tctttggcta cgcagtgaat
180
cctcaagcag caccocctgc cccaccaaca ccacctcccc caactcttcc tccaccaatt
240
cccctaagg gagaagggga aagggcaggg gttgagagaa cccagaaggg cgatgtgggg
300
ntgaaccttg gggctcaatc cccctttcac cagatgccac cctccctgaa cccccacca
360
ctaccagctc cctggcctcc ctgccccttg ggagcccctt cacactcttg tgcagggact
420
tgggggcccc tggagctcag gggtcaggct gctttgtgtg agatgtagtt ttcccatctc
480
ctgggaaggg atctttcgag gttcccctct cagtcttctt ccagggaaatg gcctccatga
540
ggggcagggc cagcttccat cccttctcca gcccttgggg caactgagca atatacttaa
600
cctgaatctc tactcacagc ccccaccagc tctgaatgtc taacctgctc cctgattcg
660
taaacctagg ggaaaccatc tctctcacct aatgaaccgc cttgttctga agctttctct
720
aagcccttcc cagttgcttc ctagcacatt ccattctttg tggcccaggg ctggaccaga
780
ccattgtgat acctgacccc gccacactgg gagtgtggct ttgggtttca tccctcccca
840
gcgtgggtct ctacgtccct gtttcccttg tatcaagaca ccttccctcag ctcccatgcc
900
tttggatctt ccatgttctt ccccatattc ctggacttcg gagatggcct ctcccaagcc
960
aggtcaagga ggtttggggg agggttgccc ctctgcccct ctgttctgtg gctgagcact
1020
ttcccgctcc agggcagggg aatattggcc ctatcttgac ccccaaattc agtgagctcc
1080
agattcttcc aaggcaaaag aggtaagcag atcacacctc tttctgcctc tacatatggc
1140
ctattctggg ctagaccaga tttggggggc aggaggggaag aactccatat gggatggaga
1200
agggaatcta ctttctccct gttttttttt cctgatgggt tctcccagac tagaccaaat
1260
agccagaaaa atgatagggg tcggatgggt gggtaagccc aggatttgca catgaccttc
1320
catccttacc tgtattccca tctcccagc gtcactcccc tcaccaatca ctccagatgg
1380
ttttggggga accattctac tcttctgggt ggctttgggg tatccccacc aactttccct
1440
tcaaaatagc accttacacc ccatctttga ctcagttccc cacacccaaa gatcccagcc
1500
tagggatggg gtacagggac tttaaatagt ccctaattccc taatttgcac tagttaacct
1560

tggtcagggg ccctgtatct ccttccagtg ggggagataa atgtttgctc ctaattctct
1620
ttgaaaactg ggcctccctg ctctgtgatt ggataaatat ttcccatccc acccacctcc
1680
ccccaaaaa tagctcacia ggggagagcc agtatggggg agcaaatttg acaaatggga
1740
attagaggag tgcagtttta aaaggaaaag ttgtgtcat caaatggca gccttttccc
1800
cagctactgt ttttggggcc aagatggctg ccctagcagc aatcactgcc aagggaaga
1860
tcatggcttt tggaggagg tgagttagg gagggccagg accatcctcc taccctcat
1920
accctcccag catatacaa aggggaggtt ttagacaggc tccctgaatg ttaaccaag
1980
aggagtact ccttcattcc tctctgtct ctttgactt ttcttggctt tggccacagc
2040
ctgagtgcg aatttcctac tgaatgtacc aagttccaat ttttaagggg gggaaagggt
2100
tcaaatgggg aaaaacacac aaaaaaaaaa tcaataaaa ttcccacaaa tcttgtttct
2160
ggcactttag aaaaactgca aaaaaatacg taataaagaa tacatatata tatatctaca
2220
cacaaattat atatctatct atctatacag cggaaccaca agagagactg aggaaggcct
2280
ggaggcaggg gcagagggtga cgacagtgcc cctatatcct taaccatac tctctgagg
2340
caaacaggca tgggaaaatg gaagggtga ggatggaccg gagaattgga acttcagaat
2400
aggcaaaaat tccaaaacca tggacatttt tttttgggag aattgagatt gtagacattt
2460
tttttttctt aaatatgatc aaggaaaata gcttccagaa tgtggtggtt ctgggcaaca
2520
aatgagattg tggcgacgtg gagattaaaa tatatgtatt tgagctgggg aatttgaata
2580
ttgtgagttt cagatgttgg aaatttggga ttttgagtt ttgtcttttg aaaatgatca
2640
agtcttgcg gttcgtgccc tctttcccca tgttccctgg gaagacgggt ggtggcagag
2700
tgagaaggcc actggttctg tgccgcagca cgcaaaattt agaattctac agactagctc
2760
tatagtagt gaggaccag atttagagaa actgaccaat atttatctcc gcatttgtgt
2820
gtgtgtccaa ctctgtaggc caataaacca acaagacaaa tgaactgtgc tccccaaaaa
2880
aaaaaaaaa aatgtctaca atctcaattc t
2911

<210> 4970

<211> 155

<212> PRT

<213> Homo sapiens

<400> 4970

Pro Xaa Ser Leu Ser Thr Leu Ser Pro Thr Arg Ser Ser Met Ala Pro

```
<210> 4971
<211> 2939
<212> DNA
<213> Homo sapiens
```

```

<400> 4971
gaagaacctc gtctgcggag gaaaaggtag atgttaaattg gtaactacgc gcgagggttct
60
gaggagccct gggaacagga aggagaaaag aataccaaaa gtgacaacag tttgccaatc
120
gcagtcttta atctgataaa gcggttatct cgtcttgagt ccaggtgcc gagtcaatcc
180
ccatacacag ccgccgccat tgcctcgagt ccttgtgtct gactgtctgt tcctgctgct
240
gtatgacaca gcacctcgag gcaaggaaat aagaaaactg cctctgatcc aagcagagaa
300
ggtcagtgag aaggctcgcc tgtagatctg ctgtagggtt tgtcaccatt ggaagcaagg
360
tcctacttca gtggcagatc tgggtggcctt ggagtggctg aagaccacca ccctccacag
420
ggctggggcc atgcacagcc atccttcctt accttgagtg agcttcctct gcatgttttc
480
tatatcactg gcagagcctg tagttggaaa ggggacagag tgactactgg actttgtgtg
540
aaaacaccaa ccgggacaaa acttcagtca aggctgagac ggggtgggggt atataacttg
600
tccttacgtt aaacttgga catggttgac tctgggacag aagcaagggc tagaggaaaag
660
gctgagggtg gcctgcaaga tggaatcagt ggtcctgcc ctgctagagt gaatggtaaa
720
accagggccg aggcagtggc tgaggcagaa ctgaaaacag aatcagtgac ccaggccaaa
780
gctgggtgatg gagcaatgac caggacacat acagtgacct acagggaggc tatggctgtg
840

```

acaaggggaag tgatcaaggt ggaagataca actaagacta gagtcatggt tgagactaag
900
acaaaacccc tggcagaacg cagtatagtg ccacaaacca agtcaaaggc catgcctatg
960
tctaggggtca gtactgtaac caagtctgaa gtcaagggtg ttgctgtcat tgaggcaa
1020
attaggtcct atgccaagtc acatgataag gccaatactg ggtccagacc tgacagaagg
1080
gaagagacca gcattgggat gaaatccagt gatgaggatg aagaaaatat atgctcctgg
1140
ttctggactg gagaagagcc tagtgtaggg tcctgggttct ggctgaaga agagacctt
1200
cttcaagttt ataagccct acctaagatc caggaaaagc ccaagccac acacaaaccc
1260
acacttacta taaaacaaaa ggtaatagca tggtaagggg ccaggtatat tgtcctagt
1320
ccagttgaag gaggggagca atccttgctt ccagaaggaa actggaccct ggttgagacc
1380
ttgattgaaa ctctctggg gattcgacct ttgaccaaga tcccacctta tcatgggct
1440
tattaccaga ccttagctga gatcaaaaaa cagattaggc aaagggaata gtatgggct
1500
aatccgaagg cctgccactg caaatcacgt ggctttagt tagagcctaa agagtttgat
1560
aaacttggtg ccctccttaa gttaactaag gatcctttca ttcataaat agctacaatg
1620
ataatgggca tcagtcctgc ttatccattt actcaagata taattcatga tgtaggtatt
1680
actgttatga ttgaaaactt ggtcaataat cccaatgtta aagaacaccc tggagcttta
1740
agtatgggtg atgacagctc tgagtcttcc gaagaaccaa aatcagggga gtcatatata
1800
catcaagttt gtaaaggcat aatctcttgc cccttgaact cccctgtgca gctggctgga
1860
ctgaaattac tagggcactt gattataaaa tttgaagatc actatgtgat taccagttat
1920
attccagatt tcctcacctt gttaacaag ggaagtgtca aaaccaagtt ttatgtttta
1980
aaagtgtttt cgtgtttgtc taaaaatcac gccaatataa gagaattgat cagtgccaaa
2040
gtactgtcat cattgggtgc accctttaac aagaatgagt caaaggccaa tattctta
2100
attattgaaa tatttgagaa tataaatttt cagttcaaaa caaaggcaaa gctatttacc
2160
aaggaaaagt tcaactaatc tgagcttatt tcaatatcc aggaagcaaa acagtttggt
2220
cagaaactcc aagacttagc agagcacagt gatcccgaag tgagagataa agtcatacga
2280
ttaatactaa aactctgaat acccctctgt tctcataaag cctcaaacag ttttttgga
2340
ttgcaatatg aaaccaatgc atattgtaat tataaattca atacttatgt tttccatgt
2400
gattgaggga ggcaatttta tggataccaa ttaatcttga gatcctgaac atgtgctgat
2460

ttttattgtg ctatatagta tataaattga gatatttttg gtatttctgc aacgtgacct
 2520
 gataatgaat ctattcatcc tgagtaagct atacttctgt gctttatatt gatattgtga
 2580
 ttcttttgag attttattta catgttgta ataaagttgc atgctaaaac tggtgaaaat
 2640
 attgtcctag ttcttcagct gaaatctagt ctggggggat aaagcacaga gagcataaag
 2700
 atggtgaaga acactgcctg tgtgtctgta gtggggcaca aacaaaacaa gttcacattg
 2760
 acagattatt tagtttcgac atacttaaaa agtagaatca ctctatgcaa gaaggcagga
 2820
 ctgtgctatt agttgtctgt aggtccttac tgatagggct tcaaagagg aatgaagccc
 2880
 tatctgggca gctctgggga agggagtaag gaggaaggga atacagatgc tttcattgt
 2939

<210> 4972

<211> 558

<212> PRT

<213> Homo sapiens

<400> 4972

Met	Val	Asp	Ser	Gly	Thr	Glu	Ala	Arg	Ala	Arg	Gly	Lys	Ala	Glu	Ala
1				5					10				15		
Gly	Leu	Gln	Asp	Gly	Ile	Ser	Gly	Pro	Ala	Thr	Ala	Arg	Val	Asn	Gly
			20					25					30		
Lys	Thr	Gln	Ala	Glu	Ala	Val	Ala	Glu	Ala	Glu	Leu	Lys	Thr	Glu	Ser
		35					40					45			
Val	Thr	Gln	Ala	Lys	Ala	Gly	Asp	Gly	Ala	Met	Thr	Arg	Thr	His	Thr
	50					55					60				
Val	Thr	Tyr	Arg	Glu	Ala	Met	Ala	Val	Thr	Arg	Glu	Val	Ile	Lys	Val
65					70					75					80
Glu	Asp	Thr	Thr	Lys	Thr	Arg	Val	Met	Val	Glu	Thr	Lys	Thr	Lys	Pro
				85					90					95	
Leu	Ala	Glu	Arg	Ser	Ile	Val	Pro	Gln	Thr	Lys	Ser	Lys	Ala	Met	Pro
				100					105					110	
Met	Ser	Arg	Val	Ser	Thr	Val	Thr	Lys	Ser	Glu	Val	Lys	Val	Val	Ala
		115						120					125		
Val	Ile	Glu	Ala	Asn	Ile	Arg	Ser	Tyr	Ala	Lys	Ser	His	Asp	Lys	Ala
	130					135						140			
Asn	Thr	Gly	Ser	Arg	Pro	Asp	Arg	Arg	Glu	Glu	Thr	Ser	Ile	Gly	Met
145					150					155					160
Lys	Ser	Ser	Asp	Glu	Asp	Glu	Glu	Asn	Ile	Cys	Ser	Trp	Phe	Trp	Thr
			165						170					175	
Gly	Glu	Glu	Pro	Ser	Val	Gly	Ser	Trp	Phe	Trp	Pro	Glu	Glu	Glu	Thr
			180					185					190		
Ser	Leu	Gln	Val	Tyr	Lys	Pro	Leu	Pro	Lys	Ile	Gln	Glu	Lys	Pro	Lys
		195						200					205		
Pro	Thr	His	Lys	Pro	Thr	Leu	Thr	Ile	Lys	Gln	Lys	Val	Ile	Ala	Trp
	210					215						220			
Ser	Arg	Ala	Arg	Tyr	Ile	Val	Leu	Val	Pro	Val	Glu	Gly	Gly	Glu	Gln
225					230					235					240
Ser	Leu	Pro	Pro	Glu	Gly	Asn	Trp	Thr	Leu	Val	Glu	Thr	Leu	Ile	Glu

245 250 255
 Thr Pro Leu Gly Ile Arg Pro Leu Thr Lys Ile Pro Pro Tyr His Gly
 260 265 270
 Pro Tyr Tyr Gln Thr Leu Ala Glu Ile Lys Lys Gln Ile Arg Gln Arg
 275 280 285
 Glu Lys Tyr Gly Pro Asn Pro Lys Ala Cys His Cys Lys Ser Arg Gly
 290 295 300
 Phe Ser Leu Glu Pro Lys Glu Phe Asp Lys Leu Val Ala Leu Leu Lys
 305 310 315 320
 Leu Thr Lys Asp Pro Phe Ile His Glu Ile Ala Thr Met Ile Met Gly
 325 330 335
 Ile Ser Pro Ala Tyr Pro Phe Thr Gln Asp Ile Ile His Asp Val Gly
 340 345 350
 Ile Thr Val Met Ile Glu Asn Leu Val Asn Asn Pro Asn Val Lys Glu
 355 360 365
 His Pro Gly Ala Leu Ser Met Val Asp Asp Ser Ser Glu Ser Ser Glu
 370 375 380
 Glu Pro Lys Ser Gly Glu Ser Tyr Ile His Gln Val Cys Lys Gly Ile
 385 390 395 400
 Ile Ser Cys Pro Leu Asn Ser Pro Val Gln Leu Ala Gly Leu Lys Leu
 405 410 415
 Leu Gly His Leu Ser Ile Lys Phe Glu Asp His Tyr Val Ile Thr Ser
 420 425 430
 Tyr Ile Pro Asp Phe Leu Thr Leu Leu Asn Lys Gly Ser Val Lys Thr
 435 440 445
 Lys Phe Tyr Val Leu Lys Val Phe Ser Cys Leu Ser Lys Asn His Ala
 450 455 460
 Asn Thr Arg Glu Leu Ile Ser Ala Lys Val Leu Ser Ser Leu Val Ala
 465 470 475 480
 Pro Phe Asn Lys Asn Glu Ser Lys Ala Asn Ile Leu Asn Ile Ile Glu
 485 490 495
 Ile Phe Glu Asn Ile Asn Phe Gln Phe Lys Thr Lys Ala Lys Leu Phe
 500 505 510
 Thr Lys Glu Lys Phe Thr Lys Ser Glu Leu Ile Ser Ile Phe Gln Glu
 515 520 525
 Ala Lys Gln Phe Gly Gln Lys Leu Gln Asp Leu Ala Glu His Ser Asp
 530 535 540
 Pro Glu Val Arg Asp Lys Val Ile Arg Leu Ile Leu Lys Leu
 545 550 555

<210> 4973

<211> 3555

<212> DNA

<213> Homo sapiens

<400> 4973

gcgagggtga caggaaaccc tgtgcaggga gcgccgccat cttggaccag cccgaggaag
 60
 atactgaggg agcacaggag cagtcaccgc tgccactgct actgccgcta ctgctgccgg
 120
 cgcgtctgca cctctcggcc tgccagtgtta cctgccggcg cctcggtcga cgcggccg
 180
 cccctctccc gctgcgtccg cactcctggt cctgggtcctg acgccccct cccgcccggg
 240

aagctgcccc gccaccagca acccccagct gccaccatgg caactgcacc atacaactac
300
tcttacatct ttaaataatat tattattggg gacatgggag taggaaaatc ttgcttgctt
360
catcaattta cagaaaaaaaa atttatggct gattgtcctc acacaattgg tggtgaattt
420
ggtacaagaa taatcgaagt tagtggccaa aaaataaaac tgcagatttg ggatacggca
480
ggacaggagc gatttagggc tggtacacgg agctactaca gaggagctgc gggagctctt
540
atggtctatg atatcactag aagaagtaca tataaccact taagcagctg gttgacagat
600
gcaaggaatc tcaccaatcc aaatactgta ataattctca taggaaataa agcagatttg
660
gaggcacaga gagatgttac atatgaagaa gccaaacagt ttgctgaaga aaatggctta
720
ttgttcctcg aagcgagtgc aaaaacggga gagaatgtag aagatgcctt ccttgaggct
780
gccaaagaaa tctatcagaa cattcaggat ggaagcttgg atctgaatgc tgctgagtct
840
ggtgtacaac acaaaccttc agccccgcag ggaggccggc taaccagtga accccaaccc
900
cagagagaag gctgtggctg ctagtgacct ctttgctgtg gcccctcatt tgacctttca
960
cctctgtctg ttggaagcag tactttttac tgccctcattg tcttctgtac atcttactgg
1020
gtttaattaa aaaaaagaa aaaactctgt tgtaaaaaaca gtttaacaca atactaaact
1080
gctaaacaac tagatgtaat caggttatca aaggcaagta gagtaataaa tctctcctgc
1140
atggtaaate tagacttttt ttcccccttg tcctcgtgat aagtatgtca ccaatatatg
1200
atttaaaccg agcactgatg ctggacttca tgatttttac cctcccttg gcaaggcttt
1260
gtctcactgt acggtttaac ttggtgatat cttaagcctt tcttcccatc cttaactgtt
1320
caagtatgtc tggtgtaacc aataagttta ttgctgtgaa attacttctg atggtagaga
1380
aggggttcta taactgcttt tgttttgttt tggataaatt tcctgttgtg tgggtggcat
1440
ttttcttaac gagatttgct tctgtcttag cctcacacag ggaaaatac catttatctt
1500
ctctcctgtg cttaattaat agctttatct ttttttatac cattttatcc ttttctcttt
1560
aacagaaagt aaatatgtat aaaatttgaa ggaatcgaac taacaatata ttctgtgtat
1620
attattttta tgaagaaaat aaattgatta ctggcattgg aacagtataa aataccagtt
1680
tgtacagtat gacctatag tgaccatgtt actcccttcc atttcacaca aagaaataga
1740
cacaactgca gttcacaagt agtactggct ccacccttg gtgctggcag tgtttgggga
1800
cattatgctg gaaagagctc ctagcatcag aggattaaca ctagcagatt ctgttccatc
1860

tttgcaactgt tgcttacctg ctgattttct taactgttct tgtgcaatcg acaatgtgct
1920
aacctgcttt tctctttttg taaacgtttt tgcattacag gctgcattct tgccttactg
1980
tatagaaaaa gaaaaaaggc tgggtttact attgcacatt ttaagctttt atacctttat
2040
cttcttgga tggtcagatt ctgaactgga cagtcagaac cacaggtctg ctgttaaggg
2100
attttaaatt gtgcattttt aaccctacag tgaaataact taagatatcc ctgtgttcac
2160
agtgtgaggg gctgttttat gtcattgttg cataaattgt tttgtaaaag ggaaagtgtt
2220
tctaaagggtg tttcagcgtg tgtgctgata caaagtaagt tattactttg caccagggtg
2280
tttgccact gaattaatac tgtatagcaa gagaaacaat cttatttttt tggacaacat
2340
gttttattaa gttcttcatt tctgttgatt tttttattg catttatgat tcagtggctg
2400
ggaattgaga atttatttga aatagaatag gtaacacctc agcgtactat agaaaatgca
2460
ctcagctcaa ctgctgtgtt taaaatacac attttaaatc cctctttaca gacactaaca
2520
taaaagtaca tctttctggg ttgtaaacat gtggtagtag cagagtattg tatagtcaat
2580
gttaaataaa agccaaaact ggaatgtgca gaaagtaggc tttggttaat ttgtggattc
2640
atttttattt ttgtctttgt ttaacttttt aaaaaataag atttctggag tagattggta
2700
tattctgtta aagacttaca gtgatccatt ttgcttacac tgttgcatca caagggactc
2760
accaggggac catgacctgc tgggtgtgtg gtatatttac aaaaacaaaa caaacaacc
2820
accattggg atataaggta gcaatcaca actaaagact gcggcttgtt gaggtgcaat
2880
accctgactc ccaaagttag ttacagtggg ttttattgtt tttgtgactg aaggatttat
2940
tcagactgct gtactcttca tttgatgtaa caaatgcta ttaatctaaa tatttgtaaa
3000
taaagtacct gtatctagat taaattaaaa ttggttgcac tattttctga actataatag
3060
ggtttttctt cagggaaca atttgacgtg tcatcagttt ttattgcagc actgtccata
3120
ttcattgtat aaagagaggt ctacgtatgt agcatataaa accacatcac taagtaatag
3180
accacagct ttattcttgt gtttacatta cccttgaaat gtttccagtc aaccttttc
3240
agtgtaatag cagcacattt ggtggctgat gctgttctcc tttgactgta cggggagcca
3300
gattctatca tatgcatgtg taatcccctg taatacactc aggtgctcac aaatagagca
3360
gattgtcata ttgtaacatg cgtgtgccag acaccgggca gtacactttg gaaagaatgt
3420
gaaatccttt taatttttaa tccatagctt actgcttgtg cagtcacctg cctctcgagg
3480

ttgctcattg cccttgacc tgtgaggagg ccctcagatt agtaattggt gcttagtact
 3540
 atttatgctt aaatg
 3555

<210> 4974
 <211> 215
 <212> PRT
 <213> Homo sapiens

<400> 4974
 Met Ala Thr Ala Pro Tyr Asn Tyr Ser Tyr Ile Phe Lys Tyr Ile Ile
 1 5 10 15
 Ile Gly Asp Met Gly Val Gly Lys Ser Cys Leu Leu His Gln Phe Thr
 20 25 30
 Glu Lys Lys Phe Met Ala Asp Cys Pro His Thr Ile Gly Val Glu Phe
 35 40 45
 Gly Thr Arg Ile Ile Glu Val Ser Gly Gln Lys Ile Lys Leu Gln Ile
 50 55 60
 Trp Asp Thr Ala Gly Gln Glu Arg Phe Arg Ala Val Thr Arg Ser Tyr
 65 70 75 80
 Tyr Arg Gly Ala Ala Gly Ala Leu Met Val Tyr Asp Ile Thr Arg Arg
 85 90 95
 Ser Thr Tyr Asn His Leu Ser Ser Trp Leu Thr Asp Ala Arg Asn Leu
 100 105 110
 Thr Asn Pro Asn Thr Val Ile Ile Leu Ile Gly Asn Lys Ala Asp Leu
 115 120 125
 Glu Ala Gln Arg Asp Val Thr Tyr Glu Glu Ala Lys Gln Phe Ala Glu
 130 135 140
 Glu Asn Gly Leu Leu Phe Leu Glu Ala Ser Ala Lys Thr Gly Glu Asn
 145 150 155 160
 Val Glu Asp Ala Phe Leu Glu Ala Ala Lys Lys Ile Tyr Gln Asn Ile
 165 170 175
 Gln Asp Gly Ser Leu Asp Leu Asn Ala Ala Glu Ser Gly Val Gln His
 180 185 190
 Lys Pro Ser Ala Pro Gln Gly Gly Arg Leu Thr Ser Glu Pro Gln Pro
 195 200 205
 Gln Arg Glu Gly Cys Gly Cys
 210 215

<210> 4975
 <211> 1111
 <212> DNA
 <213> Homo sapiens

<400> 4975
 aatataatct gttgtctgac aggcatttcc cagaccctct tgcctccagt gagaaggaga
 60
 acactcagcc ctttgtggtc ctgcccaagg aattcccagt gtacctgtgg cagcccttct
 120
 tcagacaagg ctacttctgc ttccacgagg ctgctgacca gaagaggttt agtgcctcc
 180
 tgagtgactg cgtcaggcat ctcaatcatg attacatgaa gcagatgaca tttgaagccc
 240

aggcctttttt agaagctgtg caattcttcc gacaggagaa gggtcactat ggttcctggg
 300
 aaatgatcac tggggatgaa atccagatcc tgagtaacct ggtgatggag gagctcctgc
 360
 ccactcttca gacagacctg ctgcctaaga tgaaggggaa gaagaatgac agaaagagga
 420
 cgtggcttgg tctcctcgag gaggcctaca ccctgggttca gcatcaagtt tcagaaggat
 480
 taagtgcctt gaaggaggaa tgcagagctc tgacaaaggg cctggaagga acgatccgtt
 540
 ctgacatgga tcagattgtg aactcaaaga actattttaat tggaaagatc aaagcgatgg
 600
 tggcccagcc ggcggagaaa agctgcttgg agagtgtgca gccattcctg gcatccatcc
 660
 tggaggagct catgggacca gtgagctcgg gattcagtga agtacgtgta ctctttgaga
 720
 aagaggtgaa tgaagtcagc cagaacttcc agaccaccaa agacagtgtc cagctaaagg
 780
 agcatctaga ccggcttatg aatcttccgc tgcattccgt gaagatggaa ccttgttata
 840
 ctaaagtcaa cctgcttcac gagcgctgc aggatctcaa gagccgcttc agattccccc
 900
 acattgatct ggtggttcag aggacacaga actacatgca ggagctaata gagaatgcag
 960
 tgttcacttt tgagcagttg ctttccccac atctccaagg agaggcctcc aaaactgcat
 1020
 tttccattga gaagggtaaa ctccgagtct taaagcaata tgattatgac agcagcacca
 1080
 tccgaaagaa gatatttcaa gaggcactag t
 1111

<210> 4976

<211> 298

<212> PRT

<213> Homo sapiens

<400> 4976

Met Lys Gln Met Thr Phe Glu Ala Gln Ala Phe Leu Glu Ala Val Gln
 1 5 10 15
 Phe Phe Arg Gln Glu Lys Gly His Tyr Gly Ser Trp Glu Met Ile Thr
 20 25 30
 Gly Asp Glu Ile Gln Ile Leu Ser Asn Leu Val Met Glu Glu Leu Leu
 35 40 45
 Pro Thr Leu Gln Thr Asp Leu Leu Pro Lys Met Lys Gly Lys Lys Asn
 50 55 60
 Asp Arg Lys Arg Thr Trp Leu Gly Leu Leu Glu Glu Ala Tyr Thr Leu
 65 70 75 80
 Val Gln His Gln Val Ser Glu Gly Leu Ser Ala Leu Lys Glu Glu Cys
 85 90 95
 Arg Ala Leu Thr Lys Gly Leu Glu Gly Thr Ile Arg Ser Asp Met Asp
 100 105 110
 Gln Ile Val Asn Ser Lys Asn Tyr Leu Ile Gly Lys Ile Lys Ala Met
 115 120 125
 Val Ala Gln Pro Ala Glu Lys Ser Cys Leu Glu Ser Val Gln Pro Phe

130 135 140
 Leu Ala Ser Ile Leu Glu Glu Leu Met Gly Pro Val Ser Ser Gly Phe
 145 150 155 160
 Ser Glu Val Arg Val Leu Phe Glu Lys Glu Val Asn Glu Val Ser Gln
 165 170 175
 Asn Phe Gln Thr Thr Lys Asp Ser Val Gln Leu Lys Glu His Leu Asp
 180 185 190
 Arg Leu Met Asn Leu Pro Leu His Ser Val Lys Met Glu Pro Cys Tyr
 195 200 205
 Thr Lys Val Asn Leu Leu His Glu Arg Leu Gln Asp Leu Lys Ser Arg
 210 215 220
 Phe Arg Phe Pro His Ile Asp Leu Val Val Gln Arg Thr Gln Asn Tyr
 225 230 235 240
 Met Gln Glu Leu Met Glu Asn Ala Val Phe Thr Phe Glu Gln Leu Leu
 245 250 255
 Ser Pro His Leu Gln Gly Glu Ala Ser Lys Thr Ala Phe Ser Ile Glu
 260 265 270
 Lys Val Lys Leu Arg Val Leu Lys Gln Tyr Asp Tyr Asp Ser Ser Thr
 275 280 285
 Ile Arg Lys Lys Ile Phe Gln Glu Ala Leu
 290 295

<210> 4977

<211> 3309

<212> DNA

<213> Homo sapiens

<400> 4977

nnaaaggaag ggagggaggg agaaaggaga agttggttta gaggccagcc ggacgagctt
 60
 tgggcaccgc ccttaggagg gccaccctca gagtctgaca gcaggtgaag gtccctaaatc
 120
 tccccaaact aactggtgtc ttttctcctc ttccaagatg ctcttcccga gggagatgct
 180
 agccctttgg gtccttacct cctgccctca ggagccccgg agagaggcag tcctggcaaa
 240
 gagcaccctg aagagagagt ggtaacagcg cccccagtt cctcacagtc ggcggaagtg
 300
 ctgggagcgc tgggtgctgga tgggaccgca ccctctgcac atcacgacat cccagccctg
 360
 tcaccgctgc ttccagagga ggcccccccc aagcacgcct tgccccccaa gaagaaactg
 420
 ccttcgctca agcaggtgaa ctctgccagg aagcagctga ggcccaaggc cacctccgca
 480
 gccactgtcc aaagggcagg gtcccagcca gcgtcccagg gcctagatct cctctcctcc
 540
 tccacggaga agcctggccc accgggggac ccggaccca tcgtggcctc cgaggaggca
 600
 tcagaagtgc ccctttggct ggaccgaaag gagagtgcgg tccctacaac acccgacccc
 660
 ctgcaaatct ccccttcac ttcgagccc tatgtggccc acacactccc ccagaggcca
 720
 gaacccgggg agcctgggccc tgacatggcc caggaggccc cccaggagga caccagcccc
 780

atggccctga tggacaaagg tgagaatgag ctgactgggt cagcctcaga ggagagccag
840
gagaccacta cctccaccat tatcaccacc acgggtcatca ccaccgagca ggcaccagct
900
ctctgcagtg tgagcttctc caatcctgag gggtagattg actccagcga ctaccactg
960
ctgcccctca acaactttct ggagtgcaca tacaacgtga cagtctacac tggctatggg
1020
gtggagctcc aggtgaagag tgtgaacctg tccgatgggg aactgctctc catccgctgg
1080
gtggacggcc ctaccctgac cgtcctggcc aaccagacac tcctgggtgga ggggcaggta
1140
atccgaagcc ccaccaaacac catctccgtc tacttccgga ccttccagga cgacggcctt
1200
gggaccttcc agcttacta ccaggccttc atgctgagct gcaactttcc ccgcccgcct
1260
gactctgggg atgtcacggt gatggacctg cactcagggtg gggtagccca ctttactgc
1320
cacctgggct atgagctcca gggcgctaag atgctgacat gcatcaatgc ctccaagccg
1380
cactggagca gccaggagcc catctgtcga gctccttggt gaggggcagt gcacaatgcc
1440
accatcggcc gcgtcctctc cccaagttac cctgaaaaca caaatgggag ccaattctgc
1500
atctggacga ttgaagctcc agagggccag aagctgcacc tgcactttga gaggtctgtg
1560
ctgcatgaca aggacaggat gacgggtcac agcgggcaga ccaacaagtc agctcttctc
1620
tacgactccc ttcaaacga gagtgtccct tttgagggcc tgctgagcga aggcaacacc
1680
atccgcatcg agttcacgtc cgaccaggcc cgggcggcct ccaccttcaa catccgattt
1740
gaagcgtttg agaaaggcca ctgctatgag ccctacatcc agaatgggaa cttactaca
1800
tccgacccga cctataacat tgggactata gtggagttca cctgcgaccc cggccactcc
1860
ctggagcagg gcccgcccat catcgaatgc atcaatgtgc gggacccata ctggaatgac
1920
acagagcccc tgtgcagagc catgtgtggt ggggagctct ctgctgtggc tggggtggtg
1980
ttgtcccaa actggcccga gccctacgtg gaagggtgaag attgtatctg gaagatccac
2040
gtgggagaag agaaacggat cttcttagat atccagttcc tgaatctgag caacagtgc
2100
atcttgacca tctacgatgg cgacgaggtc atgccccaca tcttggggca gtaccttggg
2160
aacagtggcc ccagaaaact gtactcctcc acgccagact taaccatcca gttccattcg
2220
gacctgctg gcctcatctt tggaaagggc cagggttcta tcatgaacta catagaggta
2280
tcaaggaatg actcctgctc ggatttaccg gagatccaga atggctggaa aaccacttct
2340
cacacggagt tggtaggggg agccagaatc acctaccagt gtgaccccggt ctatgacatc
2400

gtggggagtg acaccctcac ctgccagtgg gacctcagct ggagcagcga ccccccattt
 2460
 tgtgagaaaa ttatgtactg caccgacccc ggagaggtgg atcactcgac cgccttaatt
 2520
 tcggatcctg tgctgctggt ggggaccacc atccaatata cctgcaaccc cggttttgtg
 2580
 cttgaaggga gttctcttct gacctgetac agccgtgaaa cagggactcc catctggacg
 2640
 tctcgctgc cccactgcgt ttcggaggag tccctggcat gtgacaaccc agggctgcct
 2700
 gaaaatggat accaaatcct gtacaagcga ctctacctgc caggagagtc cctcaccttc
 2760
 atgtgctacg aaggctttga gctcatgggt gaagtgacca tccgctgcat cctgggacag
 2820
 ccatcccaact ggaacggggc cctgcccgtg tgtaaagtta atcaagacag ttttgaacat
 2880
 gctttagaag cagaagcggc agcagagacg tcgctggaag gggggaacat ggccctggct
 2940
 atcttcatcc cggctctcat catctcctta ctgctgggag gagcctacat ttacatcaca
 3000
 agatgtcgt actattccaa cctccgctg cctctgatgt actcccaccc ctacagccag
 3060
 atcacctgg aaaccgagtt tgacaacccc atttacgaga cagggggaac ccaaaaggtt
 3120
 tagggtttca tttaaaaaga ggtacccttt aaaaaggggc ttgtgaactc aaccccaatt
 3180
 tccccgagac atttatccaa aggccttggg ggccttgatt taaaccccca aaaggcgggt
 3240
 gttttttggt taaacttttt aacaaagggt tacgggtttt ttccccggat tttataaatt
 3300
 ttaaaagtg
 3309

<210> 4978

<211> 792

<212> PRT

<213> Homo sapiens

<400> 4978

Met	Ala	Gln	Glu	Ala	Pro	Gln	Glu	Asp	Thr	Ser	Pro	Met	Ala	Leu	Met
1				5					10					15	
Asp	Lys	Gly	Glu	Asn	Glu	Leu	Thr	Gly	Ser	Ala	Ser	Glu	Glu	Ser	Gln
			20					25					30		
Glu	Thr	Thr	Thr	Ser	Thr	Ile	Ile	Thr	Thr	Thr	Val	Ile	Thr	Thr	Glu
			35				40					45			
Gln	Ala	Pro	Ala	Leu	Cys	Ser	Val	Ser	Phe	Ser	Asn	Pro	Glu	Gly	Tyr
			50			55					60				
Ile	Asp	Ser	Ser	Asp	Tyr	Pro	Leu	Leu	Pro	Leu	Asn	Asn	Phe	Leu	Glu
65					70					75				80	
Cys	Thr	Tyr	Asn	Val	Thr	Val	Tyr	Thr	Gly	Tyr	Gly	Val	Glu	Leu	Gln
			85					90					95		
Val	Lys	Ser	Val	Asn	Leu	Ser	Asp	Gly	Glu	Leu	Leu	Ser	Ile	Arg	Gly
			100					105					110		
Val	Asp	Gly	Pro	Thr	Leu	Thr	Val	Leu	Ala	Asn	Gln	Thr	Leu	Leu	Val

115 120 125
 Glu Gly Gln Val Ile Arg Ser Pro Thr Asn Thr Ile Ser Val Tyr Phe
 130 135 140
 Arg Thr Phe Gln Asp Asp Gly Leu Gly Thr Phe Gln Leu His Tyr Gln
 145 150 155 160
 Ala Phe Met Leu Ser Cys Asn Phe Pro Arg Arg Pro Asp Ser Gly Asp
 165 170 175
 Val Thr Val Met Asp Leu His Ser Gly Gly Val Ala His Phe His Cys
 180 185 190
 His Leu Gly Tyr Glu Leu Gln Gly Ala Lys Met Leu Thr Cys Ile Asn
 195 200 205
 Ala Ser Lys Pro His Trp Ser Ser Gln Glu Pro Ile Cys Ser Ala Pro
 210 215 220
 Cys Gly Gly Ala Val His Asn Ala Thr Ile Gly Arg Val Leu Ser Pro
 225 230 235 240
 Ser Tyr Pro Glu Asn Thr Asn Gly Ser Gln Phe Cys Ile Trp Thr Ile
 245 250 255
 Glu Ala Pro Glu Gly Gln Lys Leu His Leu His Phe Glu Arg Leu Leu
 260 265 270
 Leu His Asp Lys Asp Arg Met Thr Val His Ser Gly Gln Thr Asn Lys
 275 280 285
 Ser Ala Leu Leu Tyr Asp Ser Leu Gln Thr Glu Ser Val Pro Phe Glu
 290 295 300
 Gly Leu Leu Ser Glu Gly Asn Thr Ile Arg Ile Glu Phe Thr Ser Asp
 305 310 315 320
 Gln Ala Arg Ala Ala Ser Thr Phe Asn Ile Arg Phe Glu Ala Phe Glu
 325 330 335
 Lys Gly His Cys Tyr Glu Pro Tyr Ile Gln Asn Gly Asn Phe Thr Thr
 340 345 350
 Ser Asp Pro Thr Tyr Asn Ile Gly Thr Ile Val Glu Phe Thr Cys Asp
 355 360 365
 Pro Gly His Ser Leu Glu Gln Gly Pro Ala Ile Ile Glu Cys Ile Asn
 370 375 380
 Val Arg Asp Pro Tyr Trp Asn Asp Thr Glu Pro Leu Cys Arg Ala Met
 385 390 395 400
 Cys Gly Gly Glu Leu Ser Ala Val Ala Gly Val Val Leu Ser Pro Asn
 405 410 415
 Trp Pro Glu Pro Tyr Val Glu Gly Glu Asp Cys Ile Trp Lys Ile His
 420 425 430
 Val Gly Glu Glu Lys Arg Ile Phe Leu Asp Ile Gln Phe Leu Asn Leu
 435 440 445
 Ser Asn Ser Asp Ile Leu Thr Ile Tyr Asp Gly Asp Glu Val Met Pro
 450 455 460
 His Ile Leu Gly Gln Tyr Leu Gly Asn Ser Gly Pro Gln Lys Leu Tyr
 465 470 475 480
 Ser Ser Thr Pro Asp Leu Thr Ile Gln Phe His Ser Asp Pro Ala Gly
 485 490 495
 Leu Ile Phe Gly Lys Gly Gln Gly Phe Ile Met Asn Tyr Ile Glu Val
 500 505 510
 Ser Arg Asn Asp Ser Cys Ser Asp Leu Pro Glu Ile Gln Asn Gly Trp
 515 520 525
 Lys Thr Thr Ser His Thr Glu Leu Val Arg Gly Ala Arg Ile Thr Tyr
 530 535 540
 Gln Cys Asp Pro Gly Tyr Asp Ile Val Gly Ser Asp Thr Leu Thr Cys

545 550 555 560
 Gln Trp Asp Leu Ser Trp Ser Ser Asp Pro Pro Phe Cys Glu Lys Ile
 565 570 575
 Met Tyr Cys Thr Asp Pro Gly Glu Val Asp His Ser Thr Arg Leu Ile
 580 585 590
 Ser Asp Pro Val Leu Leu Val Gly Thr Thr Ile Gln Tyr Thr Cys Asn
 595 600 605
 Pro Gly Phe Val Leu Glu Gly Ser Ser Leu Leu Thr Cys Tyr Ser Arg
 610 615 620
 Glu Thr Gly Thr Pro Ile Trp Thr Ser Arg Leu Pro His Cys Val Ser
 625 630 635 640
 Glu Glu Ser Leu Ala Cys Asp Asn Pro Gly Leu Pro Glu Asn Gly Tyr
 645 650 655
 Gln Ile Leu Tyr Lys Arg Leu Tyr Leu Pro Gly Glu Ser Leu Thr Phe
 660 665 670
 Met Cys Tyr Glu Gly Phe Glu Leu Met Gly Glu Val Thr Ile Arg Cys
 675 680 685
 Ile Leu Gly Gln Pro Ser His Trp Asn Gly Pro Leu Pro Val Cys Lys
 690 695 700
 Val Asn Gln Asp Ser Phe Glu His Ala Leu Glu Ala Glu Ala Ala Ala
 705 710 715 720
 Glu Thr Ser Leu Glu Gly Gly Asn Met Ala Leu Ala Ile Phe Ile Pro
 725 730 735
 Val Leu Ile Ile Ser Leu Leu Leu Gly Gly Ala Tyr Ile Tyr Ile Thr
 740 745 750
 Arg Cys Arg Tyr Tyr Ser Asn Leu Arg Leu Pro Leu Met Tyr Ser His
 755 760 765
 Pro Tyr Ser Gln Ile Thr Val Glu Thr Glu Phe Asp Asn Pro Ile Tyr
 770 775 780
 Glu Thr Gly Gly Thr Gln Lys Val
 785 790

<210> 4979

<211> 1865

<212> DNA

<213> Homo sapiens

<400> 4979

gacccgcagg cgcagcccgg cagtcggcgg cgcgccgagg gcggaggtgg tgcgtgcgtg
 60
 cgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tggagctcgg gtgccaaggg
 120
 cgagccgtca gtccecggtt gcgagtcctt gctgtcttcc acacccttcc tccctccagg
 180
 ctcccttctt acatccttcc cgcgccccca cggttgcgga ccgagcgaga acccccttaa
 240
 gcaggtgtgg ggggcgtgcg ggggtggcacg agacaaaagg ggcacggggg taagcccggc
 300
 atggcctccc ggagcctggg gggcctgagc gggatccgcg gcggtggcgg cggagggcggc
 360
 aagaaaagcc tgagcgcccc caatgctgcg gtggagagga ggaacctgat caccgtgtgc
 420
 aggttttctg tgaagaccct gattgatcgg tcttgctttg agacaattga tgattcttct
 480

cctgaattta acaattttgc agctattttg gaacagattt taagccaccg gctaaaagg
540
caagtaacct ggtttggtta tgaaagtcct cgtagcttct gggactatat cagagtggct
600
tgccggaaag tttcacagaa ttgtatctgc agcattgaaa atatggaaaa tgtcagttct
660
tctagagcta agggtagagc ctggatcaga gtagcactca tggaaaaaca tttatctgaa
720
tacatctcta cagctctgag agacttcaaa acaaccagga gattttatga agatggagca
780
attgtcttgg gtgaagaagc aaatatgctt gctggcatgc ttctaggact caatgctatt
840
gatttcagtt tctgcctaaa gggagagggg ctggatggca gttttcctgc tgtaatagac
900
tatacaccat atttgaagta tatccaaagt tctgatagta tcagcagtga tgaggaggag
960
ctaaggactt tgggaagcag tggtagcgaa agcagtactc cagagaatgt cggacctcct
1020
ttcctcatgg atgagaacag ttggttcaac aagtgtgaaga gagttaaaaca aaagtatcag
1080
cttaccctgg aacagaaggg ttaccttgaa gaactcttac gacttcgaga gaaccaacta
1140
tctgaatctg tctcccagaa taaaatacta cttcaaagga ttgaagattc cgatctggct
1200
cataaactgg agaaggaaca attagaatat ataattgtgg agcttcaaga tcagctgact
1260
gtgctaaaga ataatgattt aagatcgaga caagagttaa ctgcccattc caccaaccag
1320
tggccttctc caggagctct ggatgtcaat gctgttgctt tggatacgtt gctttaccga
1380
aaacacaata aacagtggaa aagttatcaa agtcttgacc agttatcagc agaagttagc
1440
ctttctcaga cttcactaga tccaggccag tcacaagaag gagatggaaa acaagacaca
1500
ttaaatgtaa tgagtgaagg taaggaagat actccctcat tacttggcct ctgtggatct
1560
ctaacgtcag tggcaagtta caagtctcta acaagcttaa aatctaata ctaccttgca
1620
agtccataca cagagatgac aagtccaggc ctaactccat cctgaaaatt tttgtgtaaa
1680
agccaaaact ttttatgttg taaatgttta atttacctgt ttgactgctg ggaagacctt
1740
tgaaatttta tattgttctg gtacatgtct gaaattctat tgcttggaga gaatccctc
1800
cagataagag attttgagtg aaaaacataa tgatcctgcc atttttcatt tttaaaattc
1860
ttaca
1865

<210> 4980

<211> 266

<212> PRT

<213> Homo sapiens

<400> 4980

Glu Gly Leu Asp Gly Ser Phe Pro Ala Val Ile Asp Tyr Thr Pro Tyr
 1 5 10 15
 Leu Lys Tyr Ile Gln Ser Ser Asp Ser Ile Ser Ser Asp Glu Glu Glu
 20 25 30
 Leu Arg Thr Leu Gly Ser Ser Gly Ser Glu Ser Ser Thr Pro Glu Asn
 35 40 45
 Val Gly Pro Pro Phe Leu Met Asp Glu Asn Ser Trp Phe Asn Lys Cys
 50 55 60
 Lys Arg Val Lys Gln Lys Tyr Gln Leu Thr Leu Glu Gln Lys Gly Tyr
 65 70 75 80
 Leu Glu Glu Leu Leu Arg Leu Arg Glu Asn Gln Leu Ser Glu Ser Val
 85 90 95
 Ser Gln Asn Lys Ile Leu Leu Gln Arg Ile Glu Asp Ser Asp Leu Ala
 100 105 110
 His Lys Leu Glu Lys Glu Gln Leu Glu Tyr Ile Ile Val Glu Leu Gln
 115 120 125
 Asp Gln Leu Thr Val Leu Lys Asn Asn Asp Leu Arg Ser Arg Gln Glu
 130 135 140
 Leu Thr Ala His Leu Thr Asn Gln Trp Pro Ser Pro Gly Ala Leu Asp
 145 150 155 160
 Val Asn Ala Val Ala Leu Asp Thr Leu Leu Tyr Arg Lys His Asn Lys
 165 170 175
 Gln Trp Lys Ser Tyr Gln Ser Leu Asp Gln Leu Ser Ala Glu Val Ser
 180 185 190
 Leu Ser Gln Thr Ser Leu Asp Pro Gly Gln Ser Gln Glu Gly Asp Gly
 195 200 205
 Lys Gln Asp Thr Leu Asn Val Met Ser Glu Gly Lys Glu Asp Thr Pro
 210 215 220
 Ser Leu Leu Gly Leu Cys Gly Ser Leu Thr Ser Val Ala Ser Tyr Lys
 225 230 235 240
 Ser Leu Thr Ser Leu Lys Ser Asn Asp Tyr Leu Ala Ser Pro Thr Thr
 245 250 255
 Glu Met Thr Ser Pro Gly Leu Thr Pro Ser
 260 265

<210> 4981

<211> 1902

<212> DNA

<213> Homo sapiens

<400> 4981

nggtccacag ccaggacatc agccacagtg ccggtcctgt gcctcctggc catcatcttc
 60
 atcctcaccg cagccctttc ctatgtgctg tgcaagagga ggagggggca gtcaccgcag
 120
 tcctctccag atctgccggt tcattatata cctgtggcac ctgactctaa tacctgagcc
 180
 aagaatggaa gtttgtgagg agacggactc tatgttgccc aggctgttat ggaactcctg
 240
 agtcaagtga tcctcccacc ttggcctctg aagggtgcgag gattataggc gtcacctacc
 300
 acatccagcc tacacgtatt tgtaatatc taacatagga ctaaccagcc actgccctct
 360

cttaggcccc tcatttaaaa acggttatac tataaaatct gcttttcaca ctgggtgata
420
ataacttgga caaattctat gtgtattttg ttttgttttg ctttgctttg ttttgagacg
480
gagtctcgct ctgtcatcca ggctggagtg cagtggcatg atctcggtc actgcaaccc
540
ccatctccca ggttcaagcg attctcctgc ctctcctaa gtagctggga ctacaggtgc
600
tcaccaccac acccggttaa tttttgtatt tttagtagag acggggtttc accatgttga
660
ccaggctggc ctgcaactcc tgacctgggtg atctgcccac ccaggcctcc caaagtgtg
720
ggattaaagg tgtgagccac catgcctggc cctatgtgtg ttttttaact actaaaaatt
780
atttttgtaa tgattgagtc ttctttatgg aaacaactgg cctcagccct tgcgccctta
840
ctgtgattcc tggttcatt ttttgctgat gggtccccc ctgccaaat ctctctccca
900
gtacaccagt tgttctccc ccacctcagc cctctcctgc atcctcctgt acccgcaacg
960
aaggcctggg ctttcccacc ctccctcctt agcaggtgcc gtgctgggac accatacggg
1020
ttggtttcac ctctcagtc ccttgccctac ccagtgaga gtctgatctt gtttttattg
1080
ttattgcttt tattattatt gcttttatta tcattaaaac tctagtctt gttttgtctc
1140
tccgaatgaa gaagtatgta ttttcattag gccaaagtctg cgggaaggct ggggcagcag
1200
catgaagtgt ttgaggaagt gggttgggta tgtcagtttc catctcctct ctgagcctgt
1260
cagggtgttt ctggagtgc gagcaggagc accctgctgg agaggccaag gcatagctgt
1320
gggcaggctc gggcttcagt ttttccatgc ccaccatttg cccctttgtc ctagggtact
1380
ttgaccagca gggatgttg gtgctcatac tccccaccct acatgttccc aggttctgtc
1440
ccatggcaca ggtgatggc tccctctcag ctctgggtcc atctccctgg cctagtctc
1500
cagcatctgc tcacaggttc gagccacatc actgagcttg aggcgggcat agtcactcg
1560
cttcagagcc atctgacagt ccttcctcga agagtagctg gagccctcat ggggctgccc
1620
tgtggccacc tgggtgaggt agcggatctg agctgacagc tccgcctcca cgtgttgac
1680
tgaaagcgtg aaggccgccc cctgccggtc taggagccgc tcgttagttt tttccttgga
1740
caattctagg atcacagtac ctgcattctg aaggatggcg ccgatttccc gttcaatgtc
1800
ttccagagcg cgtagtctct cgttcgccag gctgtaggta gccattatca ctctgggaat
1860
tctcaccaag agtttctcct cagaaacgag acgcttggtc cc
1902

<210> 4982

<211> 73
 <212> PRT
 <213> Homo sapiens

<400> 4982
 Met Cys Ile Leu Phe Cys Phe Ala Leu Leu Cys Phe Glu Thr Glu Ser
 1 5 10 15
 Arg Ser Val Ile Gln Ala Gly Val Gln Trp His Asp Leu Gly Ser Leu
 20 25 30
 Gln Pro Pro Ser Pro Arg Phe Lys Arg Phe Ser Cys Leu Leu Ser
 35 40 45
 Ser Trp Asp Tyr Arg Cys Ser Pro Pro His Pro Ala Asn Phe Cys Ile
 50 55 60
 Phe Ser Arg Asp Gly Val Ser Pro Cys
 65 70

<210> 4983
 <211> 1418
 <212> DNA
 <213> Homo sapiens

<400> 4983
 cgtggtttct catgccaata ctggtggaaa aatttcatt tgttcgaaaa tcagagagaa
 60
 cactggaatg ttacgttcat aacttactaa ggattagtgt atattttcca acccttgagg
 120
 catgaaattc tggagcttat tattgaaaaa ctactcaagt tggatgtgaa tgcattcccg
 180
 cagggtattg aagatgctga agaaacagca actcaaactt ttggtgggac agattccacg
 240
 gaaggattgt ttaatatgga tgaagatgaa gaaactgaac atgaaacaaa ggctggctct
 300
 gaacggctcg accagatggg gcattcctgta gccgagcgcc tggacatcct gatgtctttg
 360
 gttttgtcct acatgaagga tgtctgctat gtagatggta aggttgataa cggcaaaaca
 420
 aaggatctat atcgcgacct gataaacatc ttgacaaac tctgttgcc caccatgcc
 480
 tctgcatg tacagttttt catgttttac ctctgtagtt tcaaattggg attcgagag
 540
 gcatttttgg aacatctctg gaaaaaattg caggacccaa gtaatcctgc catcatcagg
 600
 caggctgctg gaaattatat tggaagcttt ttggcaagag ctaaatttat tctcttatt
 660
 actgtaaaat catgcctaga tcttttgggt aactggctgc acatatacct taataaccag
 720
 gattcgggaa caaaggcatt ctgcgatgtt gctctccatg gaccatttta ctcagcctgc
 780
 caagctgtgt tctacacctt tggttttaga cacaagcagc ttttgagcgg aaacctgaaa
 840
 gaaggtttgc agtatcttca gagtctgaat ttgagcgg tagtgatgag ccagctaaat
 900
 ccctgaaga ttgctctgcc ctcatgggtt aacttttttg ctgcaatcac aaataagtac
 960

cagctcgtct tctgctacac catcattgag aggaacaatc gccagatgct gccagtcatt
 1020
 aggagtaccg ctggaggaga ctcaagtgcag acctgcacaa acccactgga caccttcttc
 1080
 ccctttgatc cctgtgtgct gaagaggtca aagaaattca ttgatcctat ttatcaggtg
 1140
 tgggaagaca tgagtgtgta agagctacag gagttcaaga aacccatgaa aaaggacata
 1200
 gtggaagatg aagatgatga ctttctgaaa ggcgaaattc cccagaaatt agtagtaagt
 1260
 ggggtctttg tgggttgga agtagtttta atgtagaaag acatttacat ataagtctgt
 1320
 ttaatttcaa aggagtttgt gaaaaaaaaat ccatggtgaa aatgaaacaa tgacatggtt
 1380
 aatctggaac ttacgttctt ataccaataa aaggtacc
 1418

<210> 4984

<211> 256

<212> PRT

<213> Homo sapiens

<400> 4984

Leu Gly Phe Ala Glu Ala Phe Leu Glu His Leu Trp Lys Lys Leu Gln
 1 5 10 15
 Asp Pro Ser Asn Pro Ala Ile Ile Arg Gln Ala Ala Gly Asn Tyr Ile
 20 25 30
 Gly Ser Phe Leu Ala Arg Ala Lys Phe Ile Pro Leu Ile Thr Val Lys
 35 40 45
 Ser Cys Leu Asp Leu Leu Val Asn Trp Leu His Ile Tyr Leu Asn Asn
 50 55 60
 Gln Asp Ser Gly Thr Lys Ala Phe Cys Asp Val Ala Leu His Gly Pro
 65 70 75 80
 Phe Tyr Ser Ala Cys Gln Ala Val Phe Tyr Thr Phe Val Phe Arg His
 85 90 95
 Lys Gln Leu Leu Ser Gly Asn Leu Lys Glu Gly Leu Gln Tyr Leu Gln
 100 105 110
 Ser Leu Asn Phe Glu Arg Ile Val Met Ser Gln Leu Asn Pro Leu Lys
 115 120 125
 Ile Cys Leu Pro Ser Val Val Asn Phe Phe Ala Ala Ile Thr Asn Lys
 130 135 140
 Tyr Gln Leu Val Phe Cys Tyr Thr Ile Ile Glu Arg Asn Asn Arg Gln
 145 150 155 160
 Met Leu Pro Val Ile Arg Ser Thr Ala Gly Gly Asp Ser Val Gln Thr
 165 170 175
 Cys Thr Asn Pro Leu Asp Thr Phe Phe Pro Phe Asp Pro Cys Val Leu
 180 185 190
 Lys Arg Ser Lys Lys Phe Ile Asp Pro Ile Tyr Gln Val Trp Glu Asp
 195 200 205
 Met Ser Ala Glu Glu Leu Gln Glu Phe Lys Lys Pro Met Lys Lys Asp
 210 215 220
 Ile Val Glu Asp Glu Asp Asp Phe Leu Lys Gly Glu Ile Pro Gln
 225 230 235 240
 Lys Leu Val Val Ser Gly Val Phe Val Gly Trp Glu Val Val Leu Met

245

250

255

<210> 4985
<211> 5695
<212> DNA
<213> Homo sapiens

<400> 4985
cgctgccgcc gtcacccgcg ggaccccgagg agcacagact cccctcccc ccggcccctc
60
aggccggggg tgaccttgcc ccctggagcc ctcacatga ataccaagga caccaccgag
120
gttgctgaaa acagccacca cctgaagatc tttctccca agaagctgct ggagtgtctt
180
cctcgtgcc cgctgctgcc tccagagagg ctacggtgga atacaaatga ggagattgca
240
tcctacctga tcaccttga gaagcatgat gagggtgtgt cttgtgcccc aaagacaagg
300
cctcagaatg gctccatcat cctctacaat cgcaagaagg tgaaatatcg gaaggatggt
360
tacctctgga agaagcggaa ggatgggaag accaccgag aggaccacat gaagctgaag
420
gtccagggca tggagcctgt ctctggcag tgtctctatg gctgtacgt tcaactcttc
480
atcgtccca cattccatcg gcgtgctac tggtgtctcc agaacctga catcgtcctt
540
gtgcactacc tgaacgtccc agcctggag gactgtgga agggctgcag cccatcttt
600
tgttccatca gcagcgaccg tcgagagtgg ctgaagtgg cccgggagga gttgttgga
660
cagctgaagc ccatgtttca tggcatcaag tggagctgcg ggaatggaac agaagagttc
720
tctgtagaac acctggtgca gcagattttg gacaccacc caaccaagcc tgctccccga
780
accacgcct gtctctgcag tggggggcct gggtctgga gccttacca caaatgcagc
840
agcacgaaac accgcatcat ctctcccaa gtggagcccc gagctttaac cctgacctt
900
atccccacc ctcaccccc agagcctcct cactgatag cccacttcc cccagagctc
960
cccaaggcac acacctcccc atcttcttcc tcttcttct cctcatcagg ttttgagag
1020
cccctagaaa tcagacctag cctccact tctcagggg gttcttcaag aggaggcact
1080
gtatctctcc tctgacagg actggagcag cgggctggag gcttgacgc caccaggcac
1140
ttggctccac aggctgatcc taggccttcc atgagtttg cagtgggtgt aggactgag
1200
ccttctgcc caccagctcc tccagtcct gcctttgacc ctgatcgtt tctcaacagc
1260
ccccagagg gccagacata tggagggggg caggagtaa gccagactt cccgaggga
1320
gaggcgcctc ataccctg ttctgccta gagcctgctg ctgccctgga gcccaggga
1380

gctgctcggg gtccccacc acagtcagta gcaggtggga gaagaggaaa ctgcttcttc
1440
atccaagatg atgacagtgg ggaggagctc aagggtcacg gggctgcccc acccatacct
1500
tcacccctc cctcaccctc accctcacct gccccttg agccgtcaag cagggtagga
1560
agaggagagg ccttgtttg aggacctgtt ggggccagt aactggagcc cttcagtctt
1620
tcatcattcc cagaccttat gggagaactc atcagtgcg aagctccaag catccctgct
1680
ccgacccccc agctgtctcc tgctcttagc accatcacag acttctcccc agagtgggcc
1740
taccagagg gtgggggtcaa ggtgctcacc acaggtcctt ggaccgaagc cgccgagcat
1800
tactcctgtg tctttgatca catcgtagt ccagcctcac ttgtccagcc tgggtgttta
1860
cgctgtact gtcccgccca tgaggtagg ctggtgtctt tgcaggtggc agggcgggag
1920
gggccccctt ctgcttctgt gctctttgag tatcgagccc gccgattcct gtctctgcct
1980
agtactcaac ttgactggct gtcactggac gacaaccagt tccggatgtc catactagag
2040
cgactggagc agatggagaa gcggatggca gagatcgag cagctgggca ggtgccttgc
2100
caggtgcctg atgctcctcc agttcaggat gaaggccagg ggcctgggtt cgaagcacgg
2160
gtagtgtct tggtagaaag catgatccca cgctccacct ggaagggtcc tgaacgtctg
2220
gcccattgaa gccccttccg gggcatgagc cttctgcacc tggctgctgc ccagggtat
2280
gcccgcctca tcgagaccct gagccagtgg cggagtgtgg agactggaag cttggactta
2340
gagcaggagg ttgaccgct caacgtggat catttctctt gcacccctct gatgtgggct
2400
tgtgccctgg gacacctgga agctgtgtg ctccctttcc gttggaaccg acaggcactg
2460
agcattcccg actctctggg ccgtctgcca ttgtctgtgg ctcatcccg gggcatgtg
2520
cgccttgccc gctgccttga ggaactacag agacaggagc cttcgggtga gccccattt
2580
gccctatcgc caccctcctc cagcccagac actggtctga gcagcgtctc ctgcctctg
2640
gagctgtcgg atggcacctt ttccgtcacg tcagcctatt ctagtgcccc agatggcagt
2700
ccccccctg cacctctgcc agcctctgag atgactatgg aggacatggc ccaggccag
2760
ctttcctctg gtgtccaga agcccccta ctctcatgg actatgaggc taccaactcc
2820
aaggggcccc tctctcctt tctgcccct ccaccagctt cagatgatgg ggctgtcca
2880
gaggacgctg acagcccaca ggctgtggat gtgatcccg tggacatgat ctactagcc
2940
aagcagatca tcgaagccac accggagcgg attaaacgag aggacttcgt ggggctgccc
3000

gaggctggag cctcaatgcg ggagcggaca ggggctgtgg ggctcagtga gaccatgtcc
3060
tggtggcca gctacctgga gaatgtggac catttcccca gctcaacccc tcccagcgaa
3120
ctgccctttg agcgaggtcg cctggctgtc ccttcagcac cctcctgggc agagttttctc
3180
tctgcatcca ccagtggcaa gatggaaagt gattttgccc tgctgacact atcagatcac
3240
gagcagcggg aactgtatga ggctgcccga gtcattccaga cggccttccg aaagtacaag
3300
ggccggcggc tgaaggagca gcaggaggtg gcagcagctg taatccagcg ctgttaccgg
3360
aagtacaagc agctgacctg gattgcactt aagtttgac tctataagaa gatgaccag
3420
gcggccatcc tgatccagag caagttccga agctactatg aacagaagcg atttcagcag
3480
agccgccgag cggctgtgct catccagcag cactaccgct cctaccgccg caggccccggc
3540
cctccccacc ggaacttcggc caccctgcct gcccgcaaca aaggctcctt tctaccaag
3600
aagcaggacc aggcagcccc gaagatcatg agattcctgc ggcgctgccg acacaggatg
3660
agggaactga agcagaacca ggagctggaa gggcttcccc agccgggact ggccacatga
3720
cctggccacc gcctttctca ccacctggg ggcgcctcgt gcagtcttaa caggagagg
3780
gctttctggg gcagggggag cccctgtcgg cagctttcct gttcaccttt gttggagccc
3840
tctgtaggcc tctcctctcc tccccacgcc ttgtctccac acccctctcc tcgtcctcc
3900
tggtcgtgcc cgtctctttt tggctcctggc tccagaaaac ccgcgcccc cctacctgca
3960
tcttccgctg tgacctccgg agccctgcct gccctgtct cccagctcct cctgctgca
4020
cccgaactcg cccctcctg acttgcccta tttatttggt cgacgcgtct ctgaatgtat
4080
ccgcctcggg tcccaccact gccttcgctg cgcacgcccc tcgtgtttca gggctgaccg
4140
tgtccccacc cgactccgca tgtttgctc tgtttctctc ctctctggcc ctgtcttacc
4200
ccatcacccg actctggcca ctgacctcag ggccgaaggg gaggtgggtg acataggaac
4260
gcgttgcgga gtccgccccg tcccccgagg ggaggggtct tgtacatact gtaacataca
4320
gagtatagt aagaatctat ttaaggcgcc gcggggaggg ctgcacggcc gggcttgtgg
4380
ttctctagcg cggcgggggc ctcttgccg ctccacgggc actttctact tgtgcatggg
4440
cttggtttat acgaattgcc attaaacatc gctgcaccag ccagcctccg gcctctgtct
4500
gcgggggcgg ggcggggcct aggccagctg gaggcgcga tgacccgcgg gcctgggac
4560
tgcccccagg ccaggcgggc ccagggtttt ccgcctccga cgtgtttccg gccttaaagg
4620

cattccgccc ttccctttaa gacgcaccgc cccctctcag tcactcccaa gatggcggac
 4680
 ctactgggct ccatcctgag ctccatggag aagccacca gcctcgggtga ccaggagact
 4740
 cggcgcaagg cccgagaaca ggccgcccgc ctgaagaaac tacaagagca agagaaacaa
 4800
 cagaaagtgg agtttcgtaa aaggatggag aaggaggtgt cagatttcat tcaagacagt
 4860
 gggcagatca agaaaaagtt tcagccaatg aacaagatcg agaggagcat actacatgat
 4920
 gtgggtggaag tggctggcct gacatccttc tcctttgggg aagatgatga ctgtcgctat
 4980
 gtcattgatct taaaaagga gtttgcaccc tcagatgaag agctagactc ttaccgtcgt
 5040
 ggagaggaat gggaccccca gaaggctgag gagaagcggg agctgaagga gctggcccg
 5100
 aggcaagagg aggaggcagc ccagcagggg cctgtggtgg tgagccctgc cagcgactac
 5160
 aaggacaagt acagccacct catcggcaag ggagcagcca aagacgcagc ccacatgcta
 5220
 caggccaata agacctacgg ctgtgtgccc gtggccaata agaggacac acgctccatt
 5280
 gaagaggcta tgaatgagat cagagccaag aagcgtctgc ggcagagtgg ggaagagttg
 5340
 ccgccaacct cctaggcgcc ccgcccagct ccctttgacc cctggggcag ggcagggggc
 5400
 agggagagac aaggctgctg ctattagagc ccatcctgga gccccacctc tgaaccacct
 5460
 cctaccagct gtccctcagg ctgggggaaa acaggtgttt gatttgtcac cggtggagct
 5520
 tggatatgtg cgtggcatgt gtgtgtgtgt gtgtgagagt gtgaatgcac aggtgggtat
 5580
 ttaattctgta ttattccccg ttcttggaat tttcttcccc atggggctgg ggtactttac
 5640
 attcaataaa tactgtttaa cccaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa
 5695

<210> 4986

<211> 1239

<212> PRT

<213> Homo sapiens

<400> 4986

Arg	Cys	Arg	Arg	His	Pro	Arg	Asp	Pro	Gly	Ser	Thr	Asp	Ser	Pro	Ser
1				5					10					15	
Pro	Arg	Pro	Leu	Arg	Pro	Gly	Val	Thr	Leu	Pro	Pro	Gly	Ala	Leu	Thr
			20					25					30		
Met	Asn	Thr	Lys	Asp	Thr	Thr	Glu	Val	Ala	Glu	Asn	Ser	His	His	Leu
			35				40					45			
Lys	Ile	Phe	Leu	Pro	Lys	Lys	Leu	Leu	Glu	Cys	Leu	Pro	Arg	Cys	Pro
			50			55					60				
Leu	Leu	Pro	Pro	Glu	Arg	Leu	Arg	Trp	Asn	Thr	Asn	Glu	Glu	Ile	Ala
				70					75					80	
65															
Ser	Tyr	Leu	Ile	Thr	Phe	Glu	Lys	His	Asp	Glu	Trp	Leu	Ser	Cys	Ala

4161

515 520 525
 Pro Val Gly Ala Ser Glu Leu Glu Pro Phe Ser Leu Ser Ser Phe Pro
 530 535 540
 Asp Leu Met Gly Glu Leu Ile Ser Asp Glu Ala Pro Ser Ile Pro Ala
 545 550 555 560
 Pro Thr Pro Gln Leu Ser Pro Ala Leu Ser Thr Ile Thr Asp Phe Ser
 565 570 575
 Pro Glu Trp Ser Tyr Pro Glu Gly Gly Val Lys Val Leu Ile Thr Gly
 580 585 590
 Pro Trp Thr Glu Ala Ala Glu His Tyr Ser Cys Val Phe Asp His Ile
 595 600 605
 Ala Val Pro Ala Ser Leu Val Gln Pro Gly Val Leu Arg Cys Tyr Cys
 610 615 620
 Pro Ala His Glu Val Gly Leu Val Ser Leu Gln Val Ala Gly Arg Glu
 625 630 635 640
 Gly Pro Leu Ser Ala Ser Val Leu Phe Glu Tyr Arg Ala Arg Arg Phe
 645 650 655
 Leu Ser Leu Pro Ser Thr Gln Leu Asp Trp Leu Ser Leu Asp Asp Asn
 660 665 670
 Gln Phe Arg Met Ser Ile Leu Glu Arg Leu Glu Gln Met Glu Lys Arg
 675 680 685
 Met Ala Glu Ile Ala Ala Ala Gly Gln Val Pro Cys Gln Gly Pro Asp
 690 695 700
 Ala Pro Pro Val Gln Asp Glu Gly Gln Gly Pro Gly Phe Glu Ala Arg
 705 710 715 720
 Val Val Val Leu Val Glu Ser Met Ile Pro Arg Ser Thr Trp Lys Gly
 725 730 735
 Pro Glu Arg Leu Ala His Gly Ser Pro Phe Arg Gly Met Ser Leu Leu
 740 745 750
 His Leu Ala Ala Ala Gln Gly Tyr Ala Arg Leu Ile Glu Thr Leu Ser
 755 760 765
 Gln Trp Arg Ser Val Glu Thr Gly Ser Leu Asp Leu Glu Gln Glu Val
 770 775 780
 Asp Pro Leu Asn Val Asp His Phe Ser Cys Thr Pro Leu Met Trp Ala
 785 790 795 800
 Cys Ala Leu Gly His Leu Glu Ala Ala Val Leu Leu Phe Arg Trp Asn
 805 810 815
 Arg Gln Ala Leu Ser Ile Pro Asp Ser Leu Gly Arg Leu Pro Leu Ser
 820 825 830
 Val Ala His Ser Arg Gly His Val Arg Leu Ala Arg Cys Leu Glu Glu
 835 840 845
 Leu Gln Arg Gln Glu Pro Ser Val Glu Pro Pro Phe Ala Leu Ser Pro
 850 855 860
 Pro Ser Ser Ser Pro Asp Thr Gly Leu Ser Ser Val Ser Ser Pro Ser
 865 870 875 880
 Glu Leu Ser Asp Gly Thr Phe Ser Val Thr Ser Ala Tyr Ser Ser Ala
 885 890 895
 Pro Asp Gly Ser Pro Pro Pro Ala Pro Leu Pro Ala Ser Glu Met Thr
 900 905 910
 Met Glu Asp Met Ala Pro Gly Gln Leu Ser Ser Gly Val Pro Glu Ala
 915 920 925
 Pro Leu Leu Leu Met Asp Tyr Glu Ala Thr Asn Ser Lys Gly Pro Leu
 930 935 940
 Ser Ser Leu Pro Ala Leu Pro Pro Ala Ser Asp Asp Gly Ala Ala Pro

```
<210> 4987
<211> 357
<212> DNA
<213> Homo sapiens
```

```
<400> 4987
gtcggggcca cggagcttgc aggagctgag gcagctcaga gccagcctcg gtggtgacct
60
cgtctccctg gtggggacac tccattttcc agctcttgat agaaacacag gtgactgtcg
120
ggaggagtgg gagggaggct ccttggtgtgg cgagtcctt cgctcttagt ggtctctgct
180
ccccttggtg aaacgcagtt ccaagaaaac aaagaggaaa tgctgcgaag agccacaagg
240
actttttctc tgagtcacaa gaagacgaat atacgctgca atgacgcagt gagggaagaa
300
```

gtcgccttgc acccatatgg ctgctgagga tgggagagat ggacgcggtc ggagaga
357

<210> 4988
<211> 105
<212> PRT
<213> Homo sapiens

<400> 4988
Met Gly Ala Arg Arg Leu Leu Pro Ser Leu Arg His Cys Ser Val Tyr
1 5 10 15
Ser Ser Ser Cys Asp Ser Glu Lys Lys Ser Leu Trp Leu Phe Ala Ala
20 25 30
Phe Pro Leu Cys Phe Leu Gly Thr Ala Phe Pro Gln Gly Glu Gln Arg
35 40 45
Pro Leu Glu Ala Lys Gly Leu Ala Thr Gln Gly Ala Ser Leu Pro Leu
50 55 60
Leu Pro Thr Val Thr Cys Val Ser Ile Lys Ser Trp Lys Met Glu Cys
65 70 75 80
Pro His Gln Gly Asp Gly Val Thr Thr Glu Ala Gly Ser Glu Leu Pro
85 90 95
Gln Leu Leu Gln Ala Pro Trp Pro Arg
100 105

<210> 4989
<211> 1723
<212> DNA
<213> Homo sapiens

<400> 4989
tgatcacatc gggggactct ttctacatcc ggctgaacct gaacatctcc agccagctgg
60
acgcctgcac catgtccctg aagtgtgacg atgttgcgca cgtccgtgac accatgtacc
120
aggacaggca cgagtggctg tgcgcgcggg tcgacccttt cacagaccat gacctggata
180
tgggcacat acccagctac agccgagccc agcagctcct cctgggtgaaa ctgcagcgcc
240
tgatgcaccg aggcagccgg gaggaggtag acggcaccca ccacaccctg cgggcactcc
300
ggaacaccct gcagccagaa gaagcgcttt caacaagcga cccccgggtc agcccccgtc
360
tctcgcgagc aagcttcctt tttggccagc tccttcagtt cgtcagcagg tccgagaaca
420
agtataagcg gatgaacagc aacgagcggg tccgcatcat ctcggggagt ccgctagggg
480
gcctggcccc gtcctcgctg gacgccacca agctcttgac tgagaagcag gaagagctgg
540
accctgagag cgagctgggc aagaacctca gcctcatccc ctacagcctg gtacgcgctt
600
tctactgca ggcgcgcccgg ccctgtctct tcacaccac cgtgctggcc aagacgctgg
660
tgcagaggct gctcaactcg ggaggtgcca tggagttcac catctgcaag tcagatatcg
720

tcacaagaga tgagttcctc agaaggcaga agacggagac catcatctac tcccagagaga
 780
 agaaccccaa cgcgttcgaa tgcacgccc ctgccaacat tgaagctgtg gccgccaaga
 840
 acaagcactg cctgctggag gctgggatcg gctgcacaag agacttgatc aagtccaaca
 900
 tctaccccat cgtgctcttc atccgggtgt gtgagaagaa catcaagagg ttcagaaagc
 960
 tgctgccccg gcctgagacg gaggaggagt tcctgcgctg gtgccggctg aaggagaagg
 1020
 agctggaggc cctgccgtgc ctgtacgcca cgggtggaacc tgacatgtgg ggcagcgtag
 1080
 aggagctgct ccgctgtgtc aaggacaaga tcggcgagga gcagcgcaag accatctggg
 1140
 tggacgagga ccagctgtga ggcgggccc ctgggcagag agactctgtg gcgcggggca
 1200
 tcctatgagg caggcaccct gggcagagag atgcagtggg tgcgggggga tcctgtggcc
 1260
 cacagagctg cccagcaga cgctccgccc caccgggtga tggagccccg gggggacagt
 1320
 cgtgcctggg gaggagcagg gtacagccca ttccccagc cctggctgac ctggcctagc
 1380
 agtttggccc tgctggcctt agcagggaga caggggagca aagaacgcca agccggaggc
 1440
 cccaggccag ccggcctctc gagagccaga gcagcagttg aatgtaatgc tggggacagg
 1500
 catgctgccg ccagtagggc ggggacccgg acagccaggt gactaccagt cctggggaca
 1560
 cactcaccat aaacacatcc ccaggcagga cagatcgggg aaggggtgtg taccaggcta
 1620
 tgatttctct tgcattaaaa tgtattatta tttctttgtt tcgacccttt gtttgtgaac
 1680
 agcttgccag gccttgagcc cttgccgctt tcctaacctg aaa
 1723

<210> 4990

<211> 54

<212> PRT

<213> Homo sapiens

<400> 4990

Thr	Ala	Pro	Thr	Thr	Pro	Cys	Gly	His	Ser	Gly	Thr	Pro	Cys	Ser	Gln
1				5					10					15	
Lys	Lys	Arg	Phe	Gln	Gln	Ala	Thr	Pro	Gly	Ser	Ala	Pro	Val	Ser	Arg
			20					25					30		
Glu	Gln	Ala	Ser	Phe	Leu	Ala	Ser	Ser	Phe	Ser	Ser	Ser	Ala	Gly	Pro
			35				40					45			
Arg	Thr	Ser	Ile	Ser	Gly										
			50												

<210> 4991

<211> 828

<212> DNA

<213> Homo sapiens

<400> 4991
 aaattttatt acccagaact gtacaaactg gtgactggga aagagccac tcggagattc
 60
 tccaccattg tggaggagga aggccacgag ggcctcacgc acttctgat gaacgaggtc
 120
 atcaagctgc agcagcagat gaaggccaag gacctgcaac gctgcgagct gctggccagg
 180
 ttgcggcagc tggaggatga gaagaagcag atgacgctga cgcgcgtgga gctgctaacc
 240
 ttccaggagc ggtactacaa gatgaaggaa gagcgggaca gctacaatga cgagctggtc
 300
 aaggtgaagg acgacaacta caacttagcc atgctgctacg cacagctcag tgaggagaag
 360
 aacatggcgg tcatgaggag ccgagacctc caactcgaga tcgatcagct aaagcaccgg
 420
 ttgaataaga tggaggagga atgtaagctg gagagaaatc agtctctaaa actgaagaat
 480
 gacattgaaa atcggcccaa gaaggagcag gttctggaac tggagcggga gaatgaaatg
 540
 ctgaagacca aaaaccagga gctgcagtcc atcatccagg ccgggaagcg cagcctgcca
 600
 gactcagaca aggccatcct ggacatcttg gaacacgacc gcaaggaggc cctggaggag
 660
 aggcaggagc tggtaacag gatctacaac ctgcaggagg aggcccgcca ggcagaggag
 720
 ctgcgagaca agtacctgga ggagaaggag gacctggagc tcaagtgtc gaccctggga
 780
 aaggactgtg aaatgtacaa gcaccgcatg aacacggtca tgctgcag
 828

<210> 4992
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 4992
 Asp Ile Leu Glu His Asp Arg Lys Glu Ala Leu Glu Asp Arg Gln Glu
 1 5 10 15
 Leu Val Asn Arg Ile Tyr Asn Leu Gln Glu Glu Ala Arg Gln Ala Glu
 20 25 30
 Glu Leu Arg Asp Lys Tyr Leu Glu Glu Lys Glu Asp Leu Glu Leu Lys
 35 40 45
 Cys Ser Thr Leu Gly Lys Asp Cys Glu Met Tyr Lys His Arg Met Asn
 50 55 60
 Thr Val Met Leu Gln
 65

<210> 4993
 <211> 837
 <212> DNA
 <213> Homo sapiens

<400> 4993

tggaccttca ggccgcccggg gcccgaggcg agggggccgc ggaccgtctc ggggcccgc
 60
 gctgcctagc gcgcgggggg cgccccagc cgggagctgg ctttctaca gctgaccact
 120
 ccagtcagga gagagagact gagaaggcta tggatcgact agcccgtgga acacagagca
 180
 ttcctaata cagtctgcc cggggtgagg gcacccattc tgaagaggaa ggctttgcca
 240
 tggatgagga ggactctgat ggagaactga atacctggga gctgtcagaa gggacaaact
 300
 gtccacccaa ggaacagcct ggcatcttt ttaatgagga ctgggactcg gaggtgaaag
 360
 cagatcaagg gaatccatat gatgctgacg acatccagga gagcatttct caagagctta
 420
 aaccttgggt gtgctgtgcc ccacaaggag acatgatcta tgacccagc tggcaccatc
 480
 cgcctccact gataccctat tattccaaga tggctttga aacaggacag tttgacgatg
 540
 ctgaagattg agtgtggagc tttctgcctt gtaggtgggc gggcctccac gtcaagatct
 600
 cttttctgt cttggagggtg aaaagtcata tctgagaaaa tgtttgcagt gaccctagt
 660
 ctggggtaca cagaccagtg ttccttattg acagtgttca ataaggcccc gtcattctcg
 720
 ccagtctgtt gttgttctta atgggctcct ccttgaaatg tgtgtgtgtt tgtgtcaaga
 780
 ggagttgtgt tctttgtaaa taaagggtta aaagagaaac caaaaaaaaa aaaaaaa
 837

<210> 4994

<211> 133

<212> PRT

<213> Homo sapiens

<400> 4994

Met	Asp	Arg	Leu	Ala	Arg	Gly	Thr	Gln	Ser	Ile	Pro	Asn	Asp	Ser	Pro
1				5					10					15	
Ala	Arg	Gly	Glu	Gly	Thr	His	Ser	Glu	Glu	Glu	Gly	Phe	Ala	Met	Asp
		20						25					30		
Glu	Glu	Asp	Ser	Asp	Gly	Glu	Leu	Asn	Thr	Trp	Glu	Leu	Ser	Glu	Gly
		35				40						45			
Thr	Asn	Cys	Pro	Pro	Lys	Glu	Gln	Pro	Gly	Asp	Leu	Phe	Asn	Glu	Asp
	50				55					60					
Trp	Asp	Ser	Glu	Leu	Lys	Ala	Asp	Gln	Gly	Asn	Pro	Tyr	Asp	Ala	Asp
65				70					75					80	
Asp	Ile	Gln	Glu	Ser	Ile	Ser	Gln	Glu	Leu	Lys	Pro	Trp	Val	Cys	Cys
		85						90						95	
Ala	Pro	Gln	Gly	Asp	Met	Ile	Tyr	Asp	Pro	Ser	Trp	His	His	Pro	Pro
		100						105					110		
Pro	Leu	Ile	Pro	Tyr	Tyr	Ser	Lys	Met	Val	Phe	Glu	Thr	Gly	Gln	Phe
		115					120						125		
Asp	Asp	Ala	Glu	Asp											
130															

<210> 4995
<211> 1595
<212> DNA
<213> Homo sapiens

<400> 4995
nntccggatt catggactcc agaagaagtg attcccaaga gattgcaaga gaaacagaag
60
tgaggacctt gaagaaactg catggttgga tcagtctgat gaagcacttg aggcttcctg
120
agcccaggca gatgtgaact cctggcaagg ggtgggcagg tccagtttgga gaagtcgggg
180
tggagcccag ggctggccct ggaatgcagt cctcagagcg gctgtgctca taggtcagaa
240
cgggaaacag ccgtacgcat ctcccaggag attgggaacc ttatgaagga aatcgagacc
300
cttgtggaag agaagaccaa ggagtcaact gatgtgagca gactgaccgg ggaagggtgg
360
cccctgctgt atgaaggcat cagtctcacc atgaactcca aactcctgaa tggttcccag
420
cgggtggtga tggacggcgt aatctctgac cacgagtgtc aggagctgca gagactgacc
480
aatgtggcag caacctcagg agatggctac cggggtcaga cctccccaca tactcccaat
540
gaaaagtctt atggtgtcac tgtcttcaaa gccctcaagc tggggcaaga aggcaaagt
600
cctctgcaga gtgcccacct gtactacaac gtgacggaga aggtgcggcg catcatggag
660
tcctacttcc gcctggatac gccctctac ttttctact ctcatctggt gtgccgcaact
720
gccatcgaag aggtccaggc agagaggaag gatgatagtc atccagtcca cgtggacaac
780
tgcacacctga atgccgagac cctcgtgtgt gtcaaagagc cccagccta caccttccgc
840
gactacagcg ccaccttcta cctaaatggg gacttcgatg gcggaaactt ttatttcaact
900
gaactggatg ccaagaccgt gacggcagag gtgtagcctc agtgtggaag agccgtggga
960
ttctcttcag gcactgaaaa cccacatgga gtgaaggctg tcaccagggg gcagcgctgt
1020
gccatcgccc tgtggttcac cctggaccct cgacacagcg agcgggacag ggtgcaggca
1080
gatgacctgg tgaagatgct cttcagccca gaagagatgg acctctcca ggagcagccc
1140
ctggatgccc agcagggccc ccccnngaac ctgcacaaga gtctctctca ggcagtgaat
1200
cgaagcccaa ggatgagcta tgacagcgtc caggtcagac ggatgggtga ctagacccat
1260
ggagaggaac tcttctgcac tctgagctgg ccagcccctc ggggctgcag agcagtgagc
1320
ctacatctgc cactcagccg aggggaccct gctcacagcc ttctacatgg tgctactgct
1380
cttggagtgg acatgaccag acaccgcacc ccctggatct ggctgagggc tcaggacaca
1440

ggcccagcca cccccagggg cctccacagg ccgctgcata acagcgatac agtacttaag
 1500
 tgtctgtgta tacaacaaaa gaataaatga ttcattggttt tttttacttg gtttgttcag
 1560
 acaatggaaa tttgccatt ctgtcaaaaa aaaaa
 1595

<210> 4996

<211> 217

<212> PRT

<213> Homo sapiens

<400> 4996

Met	Lys	Glu	Ile	Glu	Thr	Leu	Val	Glu	Glu	Lys	Thr	Lys	Glu	Ser	Leu
1				5					10					15	
Asp	Val	Ser	Arg	Leu	Thr	Arg	Glu	Gly	Gly	Pro	Leu	Leu	Tyr	Glu	Gly
			20					25					30		
Ile	Ser	Leu	Thr	Met	Asn	Ser	Lys	Leu	Leu	Asn	Gly	Ser	Gln	Arg	Val
		35					40					45			
Val	Met	Asp	Gly	Val	Ile	Ser	Asp	His	Glu	Cys	Gln	Glu	Leu	Gln	Arg
	50					55					60				
Leu	Thr	Asn	Val	Ala	Ala	Thr	Ser	Gly	Asp	Gly	Tyr	Arg	Gly	Gln	Thr
65					70					75					80
Ser	Pro	His	Thr	Pro	Asn	Glu	Lys	Phe	Tyr	Gly	Val	Thr	Val	Phe	Lys
				85					90					95	
Ala	Leu	Lys	Leu	Gly	Gln	Glu	Gly	Lys	Val	Pro	Leu	Gln	Ser	Ala	His
			100					105					110		
Leu	Tyr	Tyr	Asn	Val	Thr	Glu	Lys	Val	Arg	Arg	Ile	Met	Glu	Ser	Tyr
			115				120					125			
Phe	Arg	Leu	Asp	Thr	Pro	Leu	Tyr	Phe	Ser	Tyr	Ser	His	Leu	Val	Cys
	130					135					140				
Arg	Thr	Ala	Ile	Glu	Glu	Val	Gln	Ala	Glu	Arg	Lys	Asp	Asp	Ser	His
145					150					155					160
Pro	Val	His	Val	Asp	Asn	Cys	Ile	Leu	Asn	Ala	Glu	Thr	Leu	Val	Cys
				165					170					175	
Val	Lys	Glu	Pro	Pro	Ala	Tyr	Thr	Phe	Arg	Asp	Tyr	Ser	Ala	Ile	Leu
			180					185					190		
Tyr	Leu	Asn	Gly	Asp	Phe	Asp	Gly	Gly	Asn	Phe	Tyr	Phe	Thr	Glu	Leu
		195					200					205			
Asp	Ala	Lys	Thr	Val	Thr	Ala	Glu	Val							
	210					215									

<210> 4997

<211> 1888

<212> DNA

<213> Homo sapiens

<400> 4997

ntgcacgggg ccactaggac cctcggcgtc ccttcccctc ccccgccctg cccctctcc
 60
 cgccgcgggg acccgggcgt tctcggcgcc cagcttttga gctcgcgtcc ccaggccggc
 120
 ggggggggag gggaagagag gggaccctgg gacccccgcc cccccaccc ggccgcccct
 180

gccccccggg acccggagaa gatgtcttcg cggacggtgc tggccccggg caacgatcgg
240
aactcggaca cgcattggcac cttgggcagt ggccgctcct cggacaaagg cccgtcctgg
300
tccagccgct cactgggtgc ccgttgccgg aactccatcg cctcctgtcc cgaggagcag
360
ccccacgtgg gcaactaccg cctgctgagg accattggga agggcaactt tgccaaagtc
420
aagctggctc ggcacatcct cactggtcgg gaggttgcca tcaagattat cgacaaaacc
480
cagctgaatc ccagcagcct gcagaagctg ttccgagaag tccgcatcat gaagggccta
540
aaccacccca acatcgtgaa gctctttgag gtgattgaga ctgagaagac gctgtacctg
600
gtgatggagt acgcaagtgc tggtagccg cccaccctct ccgccctgcc cctgtgccac
660
ctccccctgc cgctgcacct gaccctgacc ccgctcggcc tctgccctgc aggagaagtg
720
tttgactacc tcgtgtcgca tggccgcatg aaggagaagg aagctcgagc caagttccga
780
cagattgttt cggctgtgca ctattgtcac cagaaaaata ttgtacacag ggacctgaag
840
gctgagaacc tcttgctgga tgccgaggcc aacatcaaga ttgctgactt tggcttcagc
900
aacgagttca cgctgggatc gaagctggac acgttctgcg ggagcccccc atatgccgcc
960
ccggagctgt ttcagggcaa gaagtacgac gggcccgagg tggacatctg gagcctggga
1020
gtcatcctgt acaccctcgt cagcggctcc ctgcccttcg acgggcacaa cctcaaggag
1080
ctgcgggagc gactactcaa agggaagtac cgggtccctt tctacatgtc aacagactgt
1140
gagagcatcc tgccggagatt tttggtgctg aaccagcta aacgctgtac tctcgagcaa
1200
atcatgaaag acaaatggat caacatcggc tatgaggggtg aggagttgaa gccatacaca
1260
gagcccgagg aggacttcgg ggacaccaag agaattgagg tgatggtggg tatgggctac
1320
acacgggaag aaatcaaaga gtccttgacc agccagaagt acaacgaagt gaccgccacc
1380
tacctcctgc tgggcaggaa gactgagccc gacgagcacg ggggagggcg agctgaagga
1440
ggagcggctg ccaggccgga aggcgagctg cagcaccgcg gggagtggga gtcgagggct
1500
gccccctcc agccccatgg tcagcagcgc ccacaacccc aacaaggcag agatcccaga
1560
gcggcggaag gacagcacga gcacccccgt gagtgaccag ggctgggggg cagggtggg
1620
ggcgccacct gggccacatt cctcaggccc tgccttcac tcattcccca gacggaactc
1680
cttcttacca actccttctt ctaccattc attcattcaa caaacattta tcgagtgcct
1740
ctgtttgcct gagctcagtt tataactaa catttgatgt tagcgataa attagtgttc
1800

340 345 350
 Thr Glu Pro Glu Glu Asp Phe Gly Asp Thr Lys Arg Ile Glu Val Met
 355 360 365
 Val Gly Met Gly Tyr Thr Arg Glu Glu Ile Lys Glu Ser Leu Thr Ser
 370 375 380
 Gln Lys Tyr Asn Glu Val Thr Ala Thr Tyr Leu Leu Leu Gly Arg Lys
 385 390 395 400
 Thr Glu Pro Asp Glu His Gly Gly Gly Gly Ala Glu Gly Gly Ala Ala
 405 410 415
 Ala Arg Pro Glu Gly Glu Leu Gln His Arg Gly Glu Trp Glu Ser Arg
 420 425 430
 Ala Ala Pro Leu Gln Pro His Gly Gln Gln Arg Pro Gln Pro Gln Gln
 435 440 445
 Gly Arg Asp Pro Arg Ala Ala Glu Gly Gln His Glu His Pro Arg Glu
 450 455 460

<210> 4999
 <211> 1630
 <212> DNA
 <213> Homo sapiens

<400> 4999
 gcggccgcgg ccgatggggg caccgtggac ttgcgcgaga tgctggctgt gtcagtgtctg
 60
 gccgcagtcc gcggcggcga cgaggtgagg cgcgtccgcg agagcaacgt cctccacgag
 120
 aagtccaagg ggaagacgcg cgagggagcc gaggacaaga tgaccagcgg cgacgtgtctg
 180
 tccaaccgca agatgttcta cctgctcaag accgccttcc ccagcgtcca gattaatact
 240
 gaggaacacg tggatgcagc tgatcaggag gttatcttgt gggatcataa gattcctgag
 300
 gatatcctaa aggaagtaac tactcctaaa gaggtaccag cagaaagtgt tactgtctgg
 360
 attgaccac ttgatgttac acaggaatat acagaggatc ttcgaaagta cgtcactact
 420
 atggtgtgtg tggctgtaaa tggtaaacc atgctaggag ttatacataa gccatthttcc
 480
 gaatatacag cttgggcaat ggtagatggt ggttcaaag tgaaagcccg ctcttcctac
 540
 aatgagaaga cccaaggat cgttgtgtct cgttccatt cagggtggt caaacagggtc
 600
 gctcttcaga cttttggaaa ccagactaca attatcccag ctggtggtgc tggttataaa
 660
 gttttagcac ttttggtgt gctgataag agtcaagaaa aagctgattt atacatccat
 720
 gtgacataca tcaaaaagtg ggatatatgt gctggtaatg ccatcttaaa agccctaggg
 780
 gggcatatga ctaccctgag tgggtgaagaa atcagttaca ctggttcaga cggcattgaa
 840
 gggggactcc ttgctagcat cagaatgaac caccaggccc tggtcagaaa actcccagat
 900
 ctagaaaaga caggacataa atgagcataa ctgattacag ggtacagttc ttcacagctg
 960

aaatgggttag cctgagatgc tggaagcttc aaaggattgg tggagactat gcatgggttaa
 1020
 ggccatcccg aacttttttaa agtattttatg aagcatcaga gacttatttt ccctgtaata
 1080
 gaatgcaaaa tcagggaaaa tgggttgctt tgtgtctcaa gtattgtctt tatttttgag
 1140
 actattttca tacagttgtc atacacaagg cgcataatata tatttgtgaa ttaaaatctg
 1200
 tagctgagtc tacattgtta tgagtcacca ttttcacaca acatcatgaa tcttcactgt
 1260
 tagtactttc atatagaatt cggttgaagg aaagattgat ttttgtgtag atgtttaata
 1320
 taactttaca actatatctc attgaaaata aagtcattgg ggattttttac ctctaatttg
 1380
 gatggaaagc acaagaagcc acacattcat taatatgcaa caaatgttgt atttatgtta
 1440
 ctgaatattt ctatggatta aaatagaaaa agtttaattg attttttctt ttaaatttta
 1500
 ataacagggt caccagctgg tagaaaatag agacacatga tgatttgcac tgtaataatt
 1560
 tctgtgtgta tgtgtgtgtg ttgttttggt tttataaaga aaagtgtgtt tgtacccatg
 1620
 agttcagcat
 1630

<210> 5000

<211> 307

<212> PRT

<213> Homo sapiens

<400> 5000

Ala	Ala	Ala	Ala	Asp	Gly	Gly	Thr	Val	Asp	Leu	Arg	Glu	Met	Leu	Ala
1				5					10					15	
Val	Ser	Val	Leu	Ala	Ala	Val	Arg	Gly	Gly	Asp	Glu	Val	Arg	Arg	Val
			20					25					30		
Arg	Glu	Ser	Asn	Val	Leu	His	Glu	Lys	Ser	Lys	Gly	Lys	Thr	Arg	Glu
		35					40					45			
Gly	Ala	Glu	Asp	Lys	Met	Thr	Ser	Gly	Asp	Val	Leu	Ser	Asn	Arg	Lys
	50					55				60					
Met	Phe	Tyr	Leu	Leu	Lys	Thr	Ala	Phe	Pro	Ser	Val	Gln	Ile	Asn	Thr
65					70				75					80	
Glu	Glu	His	Val	Asp	Ala	Ala	Asp	Gln	Glu	Val	Ile	Leu	Trp	Asp	His
			85					90					95		
Lys	Ile	Pro	Glu	Asp	Ile	Leu	Lys	Glu	Val	Thr	Thr	Pro	Lys	Glu	Val
		100						105					110		
Pro	Ala	Glu	Ser	Val	Thr	Val	Trp	Ile	Asp	Pro	Leu	Asp	Ala	Thr	Gln
		115					120					125			
Glu	Tyr	Thr	Glu	Asp	Leu	Arg	Lys	Tyr	Val	Thr	Thr	Met	Val	Cys	Val
	130					135					140				
Ala	Val	Asn	Gly	Lys	Pro	Met	Leu	Gly	Val	Ile	His	Lys	Pro	Phe	Ser
145				150					155					160	
Glu	Tyr	Thr	Ala	Trp	Ala	Met	Val	Asp	Gly	Ser	Asn	Val	Lys	Ala	
			165					170					175		
Arg	Ser	Ser	Tyr	Asn	Glu	Lys	Thr	Pro	Arg	Ile	Val	Val	Ser	Arg	Ser

180 185 190
 His Ser Gly Met Val Lys Gln Val Ala Leu Gln Thr Phe Gly Asn Gln
 195 200 205
 Thr Thr Ile Ile Pro Ala Gly Gly Ala Gly Tyr Lys Val Leu Ala Leu
 210 215 220
 Leu Asp Val Pro Asp Lys Ser Gln Glu Lys Ala Asp Leu Tyr Ile His
 225 230 235 240
 Val Thr Tyr Ile Lys Lys Trp Asp Ile Cys Ala Gly Asn Ala Ile Leu
 245 250 255
 Lys Ala Leu Gly Gly His Met Thr Thr Leu Ser Gly Glu Glu Ile Ser
 260 265 270
 Tyr Thr Gly Ser Asp Gly Ile Glu Gly Gly Leu Leu Ala Ser Ile Arg
 275 280 285
 Met Asn His Gln Ala Leu Val Arg Lys Leu Pro Asp Leu Glu Lys Thr
 290 295 300
 Gly His Lys
 305

<210> 5001

<211> 3427

<212> DNA

<213> Homo sapiens

<400> 5001

tccggaccga gggacgcggt tactccacag gatccgctga acataggatg ttgccacaaa
 60
 atctacctcg tgtatattttc tctttcactc atgagctgca caattgcaga tttgagcaca
 120
 atgtctgcag actgtgttga aaaactctga agaacctaat taacacagga tgacctagga
 180
 gtgattctaa gtctgtgtaa caagatatta ctcatatgtg aatgtgtcag tcttggtact
 240
 gaatgctgca gataacagca agtaggttct cctttatttc tgaagtattc acttgacctt
 300
 ccatcagtaa gacggacttt tctaactctgt tcttgagatg attaatggaa tacagtcagt
 360
 tccactcaag acgagaggca gatcaatact gaatatgctg tgtcattgtt ggaacagttg
 420
 aaactgtttt atgaacagca gttgtttact gacatagtgt taattgttga gggcactgaa
 480
 ttcccttgtc ataagatggt tcttgcaaca ttagactctt atttcagggc catgtttatg
 540
 agtggactaa gtgaaagcaa acaaaccat gtacacctga ggaatgtcga tgctgccacc
 600
 ttacagataa taataactta tgcatacacg ggtaacttgg caatgaatga cagcactgta
 660
 gaacagcttt atgaaacagc ttgcttccta caggtagaag atgtgttaca acgttgctga
 720
 gaatatttaa ttaaaaaaat aaatgcagag aattgtgtac gattgttgag ttttgctgat
 780
 ctcttcagtt gtgaggaatt aaaacagagt gctaaaagaa tgggtggagca caagttcact
 840
 gctgtgtatc atcaggacgc gttcatgcag ctgttacatg acctactgat agatattctc
 900

agtagtgaca atttaaagt agaaaaggaa gaaaccgttc gagaagctgc tatgctgtgg
960
ctagagtata acacagaatc acgatcccag tatttgtctt ctgttcttag ccaaatacaga
1020
attgatgcac tttcagaagt aacacagaga gcttggtttc aaggctctgcc acccaatgat
1080
aagtcagtgg tggttcaagg tctgtataag tccatgcca agtttttcaa accaagactt
1140
gggatgacta aagaggaaat gatgattttc attgaagcat cttcagaaaa tccttgtagt
1200
ctttactett ctgtctgtta cagcccccaa gcagaaaaag tttacaagtt atgtagccca
1260
ccagctgatt tgcataaggt tgggaccgtt gtaactcctg ataattgat ctacatagca
1320
gggggtcaag ttcctctgna aaaacacaaa aacaaatcac agtaaaacaa gcaaaattca
1380
gactgccttc agaactgtga attgctttta ttggtttgat gcacagcaaa atacctggtt
1440
tccaaagacc ccaatgcttt ttgtccgcat aaagccatct ttggtttgct gtgaaggcta
1500
tatctatgca attggaggag atagcgtagg tggagaactt aatcggagga ccgtagaaag
1560
atacgacact gagaaagatg agtggacgat ggtaagccct ttacctgtg cttggcaatg
1620
gagtgcagca gttgtggttc atgactgcat ttatgtgatg acactgaacc tcatgtactg
1680
ttattttcca aggtctgact catgggtaga aatggccatg agacagacta gtaggtcctt
1740
tgcttcagct gcagcttttg gtgataaaat tttctatatt ggagggttgc atattgctac
1800
caattccggc ataagactcc cctctggcac tgtagatggg tcttcagtaa ctgtggaaat
1860
ttatgatgtg aataaaaaatg agtggaaaat ggcagccaac atccctgcta agaggctact
1920
tgaccctgt gttagagctg ttgtgatctc aaattctcta tgtgtgttta tgcgagaaac
1980
ccacttaaat gagcgagcta aatacgtcac ctaccaatat gacctggaac ttgaccggtg
2040
gtctctgcgg cagcatatat ctgaacgtgt actgtgggac ttggggagag attttcgatg
2100
cactgtgggg aaactctatc catectgect tgaagagtct ccatggaaac caccaactta
2160
tcttttttca acggatggga cagaagagtt tgaactggat ggagaaatgg ttgcactacc
2220
acctgtatag tggggaagtt cagggagtgc acgcctgagt tatgtgcttt gtcattttct
2280
ttgctaaaca aaagaggcta tgaagaact aaatatgagt acataaaatt ctatctttga
2340
taaattttat ttttatgccc tacttaatat ttgcatcagt ataatatata tcagtgagtc
2400
ttacagaaag atatgcttcc ataatatgaa atagattatt caataattga gaaactttat
2460
gtgtaatcat gagagtataa gaatctggat tatctaact tgtagccct gtgtatgtac
2520

agttcaaaaa gttcatttat aaaagtagtt tcctgttcct agtgtgatgt atcacaaatt
 2580
 gtgctgaggt tatttttagta tgtgtgtttc attcccgtgc ttctgttctg aagtcctgga
 2640
 atacagtttt cagtgttaatt aattcaactg cacttaacac taatgtccgt gttggtatag
 2700
 aaatgtctaa atcctatact ctagttgagg aagatcttcc ataattttat ggtattacac
 2760
 agggaaagct atgactgcag gatcagtcta actatactat taggtgcatg tattctcttt
 2820
 tcactaactt atacttgctt atctagaata caggtcttcc agtcagctgg tcatttacca
 2880
 ggtgtggact taagttgctg ggcttgacgt aagaattgcc agccactcat tgtgcgggtc
 2940
 tgcgtggagc tttaatcaga aaaagcctcc actttctgta ttatgttaac attgggtcat
 3000
 gcatataact atctgtgctt gatgtagttc tccatcttca agatttagag tgggttaacc
 3060
 aggtcattac atcttaattt aataacaagc attactgtag agtgattgtg tatagatctg
 3120
 ttagctgtca ggggtgtgtt tttttaacct gttgtgtgctg tgtgggggtt aggattagta
 3180
 aggtgaactg ttcaggaatt ctctgcacta gctgtgcaga agagcagata actagcgtg
 3240
 ctctggcatt aatcccagga accactagca gtagtggggc gccgccaatc taacatgagc
 3300
 acaggtgctt catgacaaac attactagca tgttcaactg caccatgttc tggcactgta
 3360
 ttttgaatga cattaattta ttaaataaat tgtatatatt caaaaaaaaa aaaaaaaaaa
 3420
 aaaaaaa
 3427

<210> 5002

<211> 335

<212> PRT

<213> Homo sapiens

<400> 5002

Met	Ser	Thr	Gln	Asp	Glu	Arg	Gln	Ile	Asn	Thr	Glu	Tyr	Ala	Val	Ser
1			5						10					15	
Leu	Leu	Glu	Gln	Leu	Lys	Leu	Phe	Tyr	Glu	Gln	Gln	Leu	Phe	Thr	Asp
			20					25					30		
Ile	Val	Leu	Ile	Val	Glu	Gly	Thr	Glu	Phe	Pro	Cys	His	Lys	Met	Val
		35					40					45			
Leu	Ala	Thr	Cys	Ser	Ser	Tyr	Phe	Arg	Ala	Met	Phe	Met	Ser	Gly	Leu
	50					55				60					
Ser	Glu	Ser	Lys	Gln	Thr	His	Val	His	Leu	Arg	Asn	Val	Asp	Ala	Ala
65				70				75					80		
Thr	Leu	Gln	Ile	Ile	Ile	Thr	Tyr	Ala	Tyr	Thr	Gly	Asn	Leu	Ala	Met
			85				90					95			
Asn	Asp	Ser	Thr	Val	Glu	Gln	Leu	Tyr	Glu	Thr	Ala	Cys	Phe	Leu	Gln
			100				105					110			
Val	Glu	Asp	Val	Leu	Gln	Arg	Cys	Arg	Glu	Tyr	Leu	Ile	Lys	Lys	Ile

115	120	125
Asn Ala Glu Asn Cys Val Arg Leu Leu Ser Phe Ala Asp Leu Phe Ser		
130	135	140
Cys Glu Glu Leu Lys Gln Ser Ala Lys Arg Met Val Glu His Lys Phe		
145	150	155
Thr Ala Val Tyr His Gln Asp Ala Phe Met Gln Leu Leu His Asp Leu		
165	170	175
Leu Ile Asp Ile Leu Ser Ser Asp Asn Leu Asn Val Glu Lys Glu Glu		
180	185	190
Thr Val Arg Glu Ala Ala Met Leu Trp Leu Glu Tyr Asn Thr Glu Ser		
195	200	205
Arg Ser Gln Tyr Leu Ser Ser Val Leu Ser Gln Ile Arg Ile Asp Ala		
210	215	220
Leu Ser Glu Val Thr Gln Arg Ala Trp Phe Gln Gly Leu Pro Pro Asn		
225	230	235
Asp Lys Ser Val Val Val Gln Gly Leu Tyr Lys Ser Met Pro Lys Phe		
245	250	255
Phe Lys Pro Arg Leu Gly Met Thr Lys Glu Glu Met Met Ile Phe Ile		
260	265	270
Glu Ala Ser Ser Glu Asn Pro Cys Ser Leu Tyr Ser Ser Val Cys Tyr		
275	280	285
Ser Pro Gln Ala Glu Lys Val Tyr Lys Leu Cys Ser Pro Pro Ala Asp		
290	295	300
Leu His Lys Val Gly Thr Val Val Thr Pro Asp Asn Asp Ile Tyr Ile		
305	310	315
Ala Gly Gly Gln Val Pro Leu Xaa Lys His Lys Asn Lys Ser Gln		
325	330	335

<210> 5003

<211> 3729

<212> DNA

<213> Homo sapiens

<400> 5003

```

ncaggtgggc ccttgccac cccaccctgg gaaggctggg ccaggatggg gcaggcacct
60
caccgcggcc aggaacagga acgggcacca tctcggggac tgatgttttt tgaatggcgc
120
tatccaccct gccctgctcg gcttgctgt gcaggcctct tggtagcacg tctgttcgta
180
atgaccgtaa caactctatt ttcttcaca gatgactctg gggacgacga cgaggctacc
240
acccagccg acaagagcga gctgcaccac accctgaaga atctttccct gaagttgat
300
gacctcagca cgtgcaatga cctcctcgcc aagcatggcg ctgccctcca gcgctccctg
360
aatgagctgg acggcctcaa gatcccatct gagagtgggg agaagctgaa ggtggtgaat
420
gagcgggcca cctcttccg catcacatcc aatgctatga tcaacgcctg cagggacttc
480
ttggaactag cagagataca cagtcggaaa tggcagcggg cactgcagta tgagcaggag
540
cagcgcgtgc acttgaggga aaccattgag cagctggcga agcagcaca cagcctcgag
600

```

cgggccttcc acagtgcccc tggccggccg gccaacccct ccaagagctt cattgagggg
660
agcctcttga ctcccaaagg agaggacagt gaggaagatg aagataccga gtactttgat
720
gccatggaag actccacatc cttcatcacc gtgatcaccg aggccaagga agacagcaga
780
aaagctgaag gtagcaccgg gacaagttcc gtggactgga gctcagcaga caatgtacta
840
gatggtgctt cgctcgtgcc caagggttca tccaaagtca agaggcgagt ccgcattccc
900
aacaagccca actacagcct taacctctgg agcatcatga agaactgcat cggccgggag
960
ctctccagga tccccatgcc ggtgaacttc aatgagcccc tgtccatgct ccagcggctg
1020
acagaggacc tggagtacca ccacctgctg gacaaggcag tgactgcac cagctcagt
1080
gagcagatgt gcctgggtggc cgccttctct gtgtcctcct actccaccac agtgcaccgc
1140
atcgccaagc ccttcaaccc catgctgggg gagaccttcg agctggaccg cctcgacgac
1200
atgggcctgc gctccctctg tgagcaggtg agccaccacc cccctcagc tgcgcactac
1260
gtgttctcca agcatggctg gagcctctgg caggagatca ccatctccag caagtccgg
1320
ggaaaataca tctccatcat gccgctaggt gccatccact tagaattcca ggccagtggg
1380
aatcactacg tgtggaggaa gagcacctca actgttcaca acatcatcgt gggcaagctc
1440
tggatcgacc agtcagggga catcgagatt gtgaaccata agaccaatga ccggtgccag
1500
ctgaagttcc tgccctacag ctacttctcc aaagaggcag cccggaaggt gacaggagt
1560
gtgagtgaca gccagggcaa ggccattac gtgctgtccg gctcgtggga tgaacaaat
1620
gagtgtcca aggtcatgca tagcagtccc agcagcccca gctctgacgg gaagcagaag
1680
acagtgtacc agacctgtc agccaagctg ctgtggaaga agtaccgct gccggagaac
1740
gaggagaaca tgtactactt ctacagctg gccctgacct tcaacgagca cgaggagggc
1800
gtagcgccaa ccgacagccg cctgcggccc gaccagcggc tgatggagaa gggccgttgg
1860
gacgaggcca ataccgagaa gcagcggctg gaggagaagc agcgctgtc gcggcgccgg
1920
cggctggagg cctgcggggc gggcagcagc tgcagctcgg aggaaggtga ggccgggagg
1980
gaaggcgcc ccggagggga ggaaaggggt gcccggttg gggtgccga gggacggatt
2040
ccgggggagc agggcacaag cccaccacc agccactgt gcctgccag cagagaagga
2100
ggcgatgcc tacacgccac tgtggtttga gaagaggctg gatccgctga ctggggagat
2160
ggcctgtgtg tacaagggcg gctactggga ggccaaggag aagcaagact ggcataatgt
2220

ccccaacatc ttctgagcgc cacccttgca acaaatacag gcgcctgcac agcctggccc
2280
acctgttcat taatgcactc aatttagtac tgaatggtct ttctcccagc ccattcccag
2340
cccttcctat ttcttttctt attttttttt ctccccacac tttcttgga ctcccacctt
2400
ggaaggagga agggctgacc tgggttctct ccagccccc ggtgcccgg gtcaccctg
2460
ccccttcatt atggacctgg gccctaccgg aaccctgcc ccagttacca caactcaggc
2520
cggctggccc gggccatggg ctgcgcaaat caccagcccc caaccaggg aggaactggc
2580
ccctcctagg gagcctcttc gactttttta gaaaaatgat ctccatttct ttccagccat
2640
gatgtttagt aaatatTTTT agtaccgcac ttagcagaca gttttccaag tgtgctttct
2700
tgccacaaaa gtgtcctggc aagagcccct tatttttaag acatcaggaa gccagaccgc
2760
tttgagttgg gagaattttg tagctcaaca tatcaagtcc tcgatggtat ctgagctgcc
2820
cacaccccca cctgccaaagg cccacagag cccaaaacag aagggggctg cccagccca
2880
gcagagcaca gagtttctgg agctcccatc cacagatgca ggagggggta ctgatggtaa
2940
cccccatgtg gatgtgagg cagcagtcct tggcctcacc ctagccagcc tgggtggctc
3000
cctagcccca agaggccagg aagggctgga aggcagggcc tgcaggtgct ccccgccctg
3060
agaccaggc cccaaatcag caataatgaa caaaccttg gccagcctg ggctggtgac
3120
ctgggcacca gagacctgc atccctcttc atcctaggag gcccctaggg gtgccccatc
3180
tcagtgtccc ctgaactctt tatttgcta atttatat atatatatga gatataaaa
3240
tatataaaa atagctattt tgcttaaatt tctacagtat gtaaaagtga aaaaatgatg
3300
aagacgggtg cacctgtctg agtttgcccc tcatgtgagc tgtgcccttc cctctcctca
3360
tgcccccttc cagcggttc tgccaacctt ggggggctgg accaccatgg cactgaccc
3420
agcccctcag aatcccacac tccaatcctt tccatttcag tttagtccta aaagttcatc
3480
acagggtctt tctttctact ccaggactgg ttttgTTTT atatatataa aaaaaaaag
3540
tgaaaacacc aatgtgtgaa atgccttaca atgcccactg gagaggcggg gcgggggtgg
3600
gcaggtggc cccactaggg ctccctacaga gctgtggaat gtacctctcc ccaacactgt
3660
tttgtagcg agcacctttt gaccagtaat aaaaaacctt ggctttggag ttttccactg
3720
aaaaaaaaa
3729

<210> 5004

<211> 642

<212> PRT

<213> Homo sapiens

<400> 5004

```

Ser Ser Thr Asp Asp Ser Gly Asp Asp Asp Glu Ala Thr Thr Pro Ala
1           5           10           15
Asp Lys Ser Glu Leu His His Thr Leu Lys Asn Leu Ser Leu Lys Leu
20           25           30
Asp Asp Leu Ser Thr Cys Asn Asp Leu Ile Ala Lys His Gly Ala Ala
35           40           45
Leu Gln Arg Ser Leu Asn Glu Leu Asp Gly Leu Lys Ile Pro Ser Glu
50           55           60
Ser Gly Glu Lys Leu Lys Val Val Asn Glu Arg Ala Thr Leu Phe Arg
65           70           75           80
Ile Thr Ser Asn Ala Met Ile Asn Ala Cys Arg Asp Phe Leu Glu Leu
85           90           95
Ala Glu Ile His Ser Arg Lys Trp Gln Arg Ala Leu Gln Tyr Glu Gln
100          105          110
Glu Gln Arg Val His Leu Glu Glu Thr Ile Glu Gln Leu Ala Lys Gln
115          120          125
His Asn Ser Leu Glu Arg Ala Phe His Ser Ala Pro Gly Arg Pro Ala
130          135          140
Asn Pro Ser Lys Ser Phe Ile Glu Gly Ser Leu Leu Thr Pro Lys Gly
145          150          155          160
Glu Asp Ser Glu Glu Asp Glu Asp Thr Glu Tyr Phe Asp Ala Met Glu
165          170          175
Asp Ser Thr Ser Phe Ile Thr Val Ile Thr Glu Ala Lys Glu Asp Ser
180          185          190
Arg Lys Ala Glu Gly Ser Thr Gly Thr Ser Ser Val Asp Trp Ser Ser
195          200          205
Ala Asp Asn Val Leu Asp Gly Ala Ser Leu Val Pro Lys Gly Ser Ser
210          215          220
Lys Val Lys Arg Arg Val Arg Ile Pro Asn Lys Pro Asn Tyr Ser Leu
225          230          235          240
Asn Leu Trp Ser Ile Met Lys Asn Cys Ile Gly Arg Glu Leu Ser Arg
245          250          255
Ile Pro Met Pro Val Asn Phe Asn Glu Pro Leu Ser Met Leu Gln Arg
260          265          270
Leu Thr Glu Asp Leu Glu Tyr His His Leu Leu Asp Lys Ala Val His
275          280          285
Cys Thr Ser Ser Val Glu Gln Met Cys Leu Val Ala Ala Phe Ser Val
290          295          300
Ser Ser Tyr Ser Thr Thr Val His Arg Ile Ala Lys Pro Phe Asn Pro
305          310          315          320
Met Leu Gly Glu Thr Phe Glu Leu Asp Arg Leu Asp Asp Met Gly Leu
325          330          335
Arg Ser Leu Cys Glu Gln Val Ser His His Pro Pro Ser Ala Ala His
340          345          350
Tyr Val Phe Ser Lys His Gly Trp Ser Leu Trp Gln Glu Ile Thr Ile
355          360          365
Ser Ser Lys Phe Arg Gly Lys Tyr Ile Ser Ile Met Pro Leu Gly Ala
370          375          380
Ile His Leu Glu Phe Gln Ala Ser Gly Asn His Tyr Val Trp Arg Lys

```



```

385          390          395          400
Ser Thr Ser Thr Val His Asn Ile Ile Val Gly Lys Leu Trp Ile Asp
          405          410          415
Gln Ser Gly Asp Ile Glu Ile Val Asn His Lys Thr Asn Asp Arg Cys
          420          425          430
Gln Leu Lys Phe Leu Pro Tyr Ser Tyr Phe Ser Lys Glu Ala Ala Arg
          435          440          445
Lys Val Thr Gly Val Val Ser Asp Ser Gln Gly Lys Ala His Tyr Val
          450          455          460
Leu Ser Gly Ser Trp Asp Glu Gln Met Glu Cys Ser Lys Val Met His
465          470          475          480
Ser Ser Pro Ser Ser Pro Ser Ser Asp Gly Lys Gln Lys Thr Val Tyr
          485          490          495
Gln Thr Leu Ser Ala Lys Leu Leu Trp Lys Lys Tyr Pro Leu Pro Glu
          500          505          510
Asn Ala Glu Asn Met Tyr Tyr Phe Ser Glu Leu Ala Leu Thr Leu Asn
          515          520          525
Glu His Glu Glu Gly Val Ala Pro Thr Asp Ser Arg Leu Arg Pro Asp
          530          535          540
Gln Arg Leu Met Glu Lys Gly Arg Trp Asp Glu Ala Asn Thr Glu Lys
545          550          555          560
Gln Arg Leu Glu Glu Lys Gln Arg Leu Ser Arg Arg Arg Arg Leu Glu
          565          570          575
Ala Cys Gly Pro Gly Ser Ser Cys Ser Ser Glu Glu Gly Glu Ala Gly
          580          585          590
Arg Glu Gly Arg Pro Gly Gly Glu Glu Arg Gly Ala Arg Val Gly Val
          595          600          605
Pro Gln Gly Arg Ile Pro Gly Glu Gln Ala Thr Ser Pro Pro Thr Ser
          610          615          620
Pro Leu Cys Leu Pro Ser Arg Glu Gly Gly Gly Cys Leu His Ala Thr
625          630          635          640
Val Val

```

<210> 5005

<211> 1120

<212> DNA

<213> Homo sapiens

<400> 5005

```

ntcgggctgt tgetgtggtt tcctgagttg ctgctgctgc ggcggcgga gcggcgtctg
60
tgcttgtgga ggtgtcgcc tctgggcgga tggtgacatt gtgttgttgt tattgctgat
120
ggtaatggcg gcggcggtgg cggcgacggt ccagacccca tccctctgt agccggagcc
180
gagacagccg acagcgaact ccgcggcctc ggagccggcg gcagcggcga ctcccctcag
240
cctccgcgcg ctcgcccgcg ggtaccccg cgccaacccc gggagtcagg ccctttgggc
300
aggggagctc ggaggctcag gatggcggt ttcgacgaaa tctatgagga agaggaggac
360
gaggagcggg ccctggagga gcagctgctc aagtactcg cggaaccggg ggtcgtccgc
420

```

ggctccgggc acgtcaccgt atttggactg agcaacaaat ttgaatctga attcccttct
 480
 tcattaactg gaaaagtagc tcctgaagaa tttaaagcca gcatcaacag agttaacagt
 540
 tgtcttaaga agaaccttcc tgtaaatgta cggtgggtac tttgtggctg cctttgttgc
 600
 tgctgcacat taggttgcag tatgtggcca gttatttgcc tcagtaaaag aacacgaaga
 660
 tcgattgaga agttattaga atgggaaaac aatagggtat accacaagct gtgcttgcat
 720
 tggagactga gcaaaaggaa atgtgaaacg aataacatga tggaatatgt catcctcata
 780
 gaatttttac caaagacacc gatttttcga ccagattagc atttacttta tttatagaga
 840
 ctttccaagt atgttgtctt tccaatgggtg ccttgcttgg tgctctcctg gtggtgacat
 900
 aacattgggt ctacagaatc gtgtgggtgt tttttgttt ttgttttttt ttttttttta
 960
 aataaccgca tgttctaagt gtgcattttt gtcaatcttt gcaacagtta tttcatacag
 1020
 atgtttaata ctttaagttat tgtgctcttt tctgttatgt attctgattt tcaaggatta
 1080
 cttttttgta ttatcaaaaa aatacatttg aacttagcat
 1120

<210> 5006

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5006

Met	Ala	Asp	Phe	Asp	Glu	Ile	Tyr	Glu	Glu	Glu	Glu	Asp	Glu	Glu	Arg
1				5				10					15		
Ala	Leu	Glu	Glu	Gln	Leu	Leu	Lys	Tyr	Ser	Pro	Asp	Pro	Val	Val	Val
			20					25					30		
Arg	Gly	Ser	Gly	His	Val	Thr	Val	Phe	Gly	Leu	Ser	Asn	Lys	Phe	Glu
		35					40					45			
Ser	Glu	Phe	Pro	Ser	Ser	Leu	Thr	Gly	Lys	Val	Ala	Pro	Glu	Glu	Phe
		50				55					60				
Lys	Ala	Ser	Ile	Asn	Arg	Val	Asn	Ser	Cys	Leu	Lys	Lys	Asn	Leu	Pro
65				70					75					80	
Val	Asn	Val	Arg	Trp	Leu	Leu	Cys	Gly	Cys	Leu	Cys	Cys	Cys	Cys	Thr
			85					90						95	
Leu	Gly	Cys	Ser	Met	Trp	Pro	Val	Ile	Cys	Leu	Ser	Lys	Arg	Thr	Arg
			100				105						110		
Arg	Ser	Ile	Glu	Lys	Leu	Leu	Glu	Trp	Glu	Asn	Asn	Arg	Leu	Tyr	His
		115					120					125			
Lys	Leu	Cys	Leu	His	Trp	Arg	Leu	Ser	Lys	Arg	Lys	Cys	Glu	Thr	Asn
	130					135					140				
Asn	Met	Met	Glu	Tyr	Val	Ile	Leu	Ile	Glu	Phe	Leu	Pro	Lys	Thr	Pro
145					150					155					160
Ile	Phe	Arg	Pro	Asp											
				165											

<210> 5007
<211> 2165
<212> DNA
<213> Homo sapiens

<400> 5007
ctgaattcgg ctgaaaaatc aagcttttttc cgaatcccag tacagccggg caattcctac
60
gcaagcactc ctgaactacg caggacccgg ctggaaagta tggccaagat tcatgccaga
120
aacggagatt tatctgaggc tgccatgtgt tacatccata ttgctgccct cattgcagag
180
tatctgaaaa gaaagggcat gttctctatg ggatggccag ctgttttgag cattacacca
240
aacattaagg aagaaggagc gatgaaagag gattctggaa tgcaagatac accatacaat
300
gagaatatcc tgggtggagca gctatacatg tgtgtggagt ttctctggaa gtctgagcga
360
tatgaannct cattgctgat gtcaacaagc ccatcattgc tgtctttgag aaacaacgag
420
acttcaaaaa attcagatct ctactacgac attcatcggg catatctgaa agtggcagag
480
gtggtgaatt cggaagcggc tgtttggtcg ctactatcgt gtggcattta tgggcagggc
540
ttttttgaag aagaagaagg taaagagtat atttataaag agcctaagct gacagggtctg
600
tccgagattt cccaaagatt actcaagctc tatgcagata aatttggagc agacaatgtg
660
aagataatcc aggattccaa caaggtaaac cccaaggatt tggaccccaa atatgcctac
720
atccagggtga cctatgtgac gccgttcttt gaggaaaagg aaatcgaaga ccggaagaca
780
gatttcgaaa tgcaccacaa catcaaccgc tttgtcttcg agacaccctt cagctgtcgc
840
ggcaagaagc acggtggggg ggcgagcag tgcaagcggc ggacgatcct gacaacgagt
900
cacctgttcc cctacgtgaa gaagagaata caagtaatta gccaatcgag cacagaactg
960
aatccaattg aagtggcaat tgacgagatg tccaagaagg tttctgagct taatcagctt
1020
tgcacaatgg aagaagtgga catgatcaga ctgcagctca aactgcaagg aagtgtcagc
1080
gtgaagggtta atgctggggc aatggcctat gcacgagctt ttcttgaaga aaccaatgca
1140
aagaagtacc ctgacaacca agtaaagctt ttgaaggaga tcttcaggca atttgcagat
1200
gcatgtgggc aggcccttga cgtgaatgag cgcctcatca aagaggacca gctggagtac
1260
caggaagaac tgaggtccca ctacaaggac atgctcagcg aactctccac agtcatgaat
1320
gagcagctct gtcgaggtcc gtgtttatac agcttctggt cctctgtgtc tagtatttcc
1380
ctcagtactg taagcaaaag tgattacggg cagggacgac ctgtcaaagc gcggagtggg
1440

ccaaacctgc actcgagtaa ttagcaaagc aactccggcc ctacccacgg tctccatctc
 1500
 atctagtgtc gaagtctgag ggctctgcag catcagaccc acctctaaga gaactttctg
 1560
 aatttgcagc taatctcggg gaagagaaag ataggtttta tttatttgaa gttttcatgg
 1620
 tgttaatat tttgtttacc tcgctagctt cagaattttg ccaacctctg aatttgcaca
 1680
 ttttgtataa tttttttttc tttgagcagt gttgatcaag ccaggttgaa tatttgccat
 1740
 gaaattccag tgaatgtgta gctcaaagtc aaaccctaag tttgctgtca gttattgtat
 1800
 ggtcagtacc ccagtcctag tacacatatt ttaaagggtta aagtgaatgt ttttgaaca
 1860
 ttttaagcata tttcagatgt aaataaaaga ttgtaaaata tacgggttttt accaaattta
 1920
 aaagatcctt tttagttaat actatgacag tactaaaaat atatgaataa catttcagat
 1980
 accattatat taaaatattt gtgtatgtgt acaaaagcgt tgataaatac taatctttta
 2040
 agtttgtgga gttcctttat ttgtaataata tgtgctctta aaagcaatgg gatgtgaaat
 2100
 tatgaaagta ttttattgtt catagaaata aaaaacacag ttactttgca aaaaaaaaaa
 2160
 aaaaaa
 2165

<210> 5008

<211> 487

<212> PRT

<213> Homo sapiens

<400> 5008

Leu	Asn	Ser	Ala	Arg	Lys	Ser	Ser	Phe	Phe	Arg	Ile	Pro	Val	Gln	Pro
1				5				10						15	
Gly	Asn	Ser	Tyr	Ala	Ser	Thr	Pro	Glu	Leu	Arg	Arg	Thr	Arg	Leu	Glu
			20					25					30		
Ser	Met	Ala	Lys	Ile	His	Ala	Arg	Asn	Gly	Asp	Leu	Ser	Glu	Ala	Ala
			35				40					45			
Met	Cys	Tyr	Ile	His	Ile	Ala	Ala	Leu	Ile	Ala	Glu	Tyr	Leu	Lys	Arg
			50			55					60				
Lys	Gly	Met	Phe	Ser	Met	Gly	Trp	Pro	Ala	Val	Leu	Ser	Ile	Thr	Pro
				70						75				80	
65	Asn	Ile	Lys	Glu	Glu	Gly	Ala	Met	Lys	Glu	Asp	Ser	Gly	Met	Gln
				85						90				95	
Thr	Pro	Tyr	Asn	Glu	Asn	Ile	Leu	Val	Glu	Gln	Leu	Tyr	Met	Cys	Val
			100					105					110		
Glu	Phe	Leu	Trp	Lys	Ser	Glu	Arg	Tyr	Glu	Xaa	Ser	Leu	Leu	Met	Ser
			115				120					125			
Thr	Ser	Pro	Ser	Leu	Leu	Ser	Leu	Arg	Asn	Asn	Glu	Thr	Ser	Lys	Asn
			130			135					140				
Ser	Asp	Leu	Tyr	Tyr	Asp	Ile	His	Arg	Ser	Tyr	Leu	Lys	Val	Ala	Glu
				145		150				155				160	
Val	Val	Asn	Ser	Glu	Ala	Ala	Val	Trp	Ser	Leu	Leu	Ser	Cys	Gly	Ile

```

                165                170                175
Tyr Gly Gln Gly Phe Phe Glu Glu Glu Glu Gly Lys Glu Tyr Ile Tyr
                180                185                190
Lys Glu Pro Lys Leu Thr Gly Leu Ser Glu Ile Ser Gln Arg Leu Leu
                195                200                205
Lys Leu Tyr Ala Asp Lys Phe Gly Ala Asp Asn Val Lys Ile Ile Gln
                210                215                220
Asp Ser Asn Lys Val Asn Pro Lys Asp Leu Asp Pro Lys Tyr Ala Tyr
225                230                235                240
Ile Gln Val Thr Tyr Val Thr Pro Phe Phe Glu Glu Lys Glu Ile Glu
                245                250                255
Asp Arg Lys Thr Asp Phe Glu Met His His Asn Ile Asn Arg Phe Val
                260                265                270
Phe Glu Thr Pro Phe Thr Leu Ser Gly Lys Lys His Gly Gly Val Ala
                275                280                285
Glu Gln Cys Lys Arg Arg Thr Ile Leu Thr Thr Ser His Leu Phe Pro
                290                295                300
Tyr Val Lys Lys Arg Ile Gln Val Ile Ser Gln Ser Ser Thr Glu Leu
305                310                315                320
Asn Pro Ile Glu Val Ala Ile Asp Glu Met Ser Lys Lys Val Ser Glu
                325                330                335
Leu Asn Gln Leu Cys Thr Met Glu Glu Val Asp Met Ile Arg Leu Gln
                340                345                350
Leu Lys Leu Gln Gly Ser Val Ser Val Lys Val Asn Ala Gly Pro Met
                355                360                365
Ala Tyr Ala Arg Ala Phe Leu Glu Glu Thr Asn Ala Lys Lys Tyr Pro
                370                375                380
Asp Asn Gln Val Lys Leu Leu Lys Glu Ile Phe Arg Gln Phe Ala Asp
385                390                395                400
Ala Cys Gly Gln Ala Leu Asp Val Asn Glu Arg Leu Ile Lys Glu Asp
                405                410                415
Gln Leu Glu Tyr Gln Glu Glu Leu Arg Ser His Tyr Lys Asp Met Leu
                420                425                430
Ser Glu Leu Ser Thr Val Met Asn Glu Gln Leu Cys Arg Gly Pro Cys
                435                440                445
Leu Tyr Ser Phe Cys Ser Ser Val Ser Ser Ile Ser Leu Ser Thr Val
                450                455                460
Ser Lys Ser Asp Tyr Gly Gln Gly Arg Pro Val Lys Ala Arg Ser Gly
465                470                475                480
Pro Asn Leu His Ser Ser Asn
                485

```

<210> 5009

<211> 426

<212> DNA

<213> Homo sapiens

<400> 5009

```

acgcgtgaag tgtttgtggc agtgctgggc acatgttaag tactcaataa ggtttaggca
60
ttattactgc cccctgtgaa ggtctggggc aggatatgaa agggcctgtg ctctccttcc
120
ccttgagat gtcagcaaag catggcgagg agagcagett ctctctgtgc ccaaaggga
180

```

gcagaagatt aggagctaga tcaagcaaga ctgggggctg caggtgtagg aagtgaatca
 240
 agatgacttc aaaagagaga ataaaaagtg ggcttatgaa gaattggtgg actcttcctg
 300
 gcaaattggg caagaaaagc agagatggtg acaggaagaa aaagcaagca tagctgtcca
 360
 ctggctgggt aagagcagct ctcaaaggtc gccagacaag catcccgctct tatgattcca
 420
 aagcat
 426

<210> 5010

<211> 119

<212> PRT

<213> Homo sapiens

<400> 5010

Met	Leu	Val	Trp	Arg	Pro	Leu	Arg	Ala	Ala	Leu	Asn	Gln	Pro	Val	Asp
1				5					10					15	
Ser	Tyr	Ala	Cys	Phe	Phe	Phe	Leu	Ser	Pro	Ser	Leu	Leu	Phe	Leu	Pro
			20					25					30		
Asn	Leu	Pro	Gly	Arg	Val	His	Gln	Phe	Phe	Ile	Ser	Pro	Leu	Phe	Ile
		35				40					45				
Leu	Ser	Phe	Glu	Val	Ile	Leu	Ile	His	Phe	Leu	His	Leu	Gln	Pro	Pro
	50					55				60					
Val	Leu	Leu	Asp	Leu	Ala	Pro	Asn	Leu	Leu	Leu	Pro	Phe	Gly	Thr	Glu
65					70					75				80	
Glu	Lys	Leu	Leu	Ser	Ser	Pro	Cys	Phe	Ala	Asp	Ile	Ser	Lys	Gly	Lys
				85				90					95		
Glu	Ser	Thr	Gly	Pro	Phe	Ile	Ser	Cys	Pro	Arg	Pro	Ser	Gln	Gly	Ala
			100					105					110		
Val	Ile	Met	Pro	Lys	Pro	Tyr									
															115

<210> 5011

<211> 3431

<212> DNA

<213> Homo sapiens

<400> 5011

nccgcatgct cccgtatctt tggttacgct cgtcagccgg tcggccgccc cctccagccg
 60
 tgtgccgcta tgggagtccc ggcgttcttc cgctggctca gccgcaagta cccgtccatc
 120
 atagtcaact gcgtggaaga gaagccaaaa gaatgcaatg gtgtaaagat tccagttgat
 180
 gccagtaaac ctaatccaaa tgatgtggag tttgataatc tgtatttgga tatgaatgga
 240
 atcatccatc cctgtactca tcctgaagac aaaccagcac caaaaaatga agatgaaatg
 300
 atgggtgcaa tttttgagta cattgacaga cttttcagta ttgtaagacc aagaagactt
 360
 ctctacatgg caatagatgg agtggcacca cgtgtaaaaa tgaaccagca gcgttcaagg
 420

aggttcaggg ccatcaaaga aggaatggaa gcagcagtcg agaagcagcg agtcagggaa
480
gaaatattgg caaaaggtgg ctttcttcct ccagaagaaa taaaagaaag atttgacagc
540
aactgtatta caccaggaac tgaattcatg gacaatcttg ctaaatgcct tcgctattac
600
atagctgacg gtttaataa tgaccctggg tggaaaaatt tgacagttat tttatctgat
660
gctagtgctc ctgggtgaagg agaacataaa atcatggatt acattagaag gcaaagagcc
720
cagcctaacc atgacccaaa tactcatcat tgtttatgtg gagcagatgc tgatctcatt
780
atgcttggcc ttgccacaca tgaaccgaac tttaccatta ttagagaaga attcaaacca
840
aacaagccca aaccatgtgg tctttgtaat cagtttggac atgaggtcaa agattgtgaa
900
ggtttgccaa gagaaaagaa gggaaagcat gatgaacttg ccgatagtct tccttgtgca
960
gaaggagagt ttatcttcct tcggcttaat gttcttcgtg agtatttggg aagagaactc
1020
acaatggcca gcctaccatt cacatttgat gttgagagga gcattgatga ctgggttttc
1080
atgtgcttct ttgtgggaaa tgacttcctc cctcatttgc catcgtaga gattagggaa
1140
aatgcaattg accgtttggg taacatatac aaaaatgtgg tacacaaaac tgggggttac
1200
cttacagaaa gtggttatgt caatctgcaa agagtacaga tgatcatgtt agcagttggt
1260
gaagttgagg atagcatttt taaaagaga aaggatgatg aggacagttt tagaagacga
1320
cagaaagaaa aaagaaagag aatgaagaga gatcaaccag ctttcactcc tagtggaata
1380
ttaactcctc atgccttggg ttcaagaaat tcaccagggt ctcaagtagc cagtaatccg
1440
agacaagcag cctatgaaat gaggatgcag aataactcta gtccttcgat atctccta
1500
acgagtttca catctgatgg ctccccgtct ccattaggag gaattaagcg aaaagcagaa
1560
gacagtgaca gtgaacctga gccagaggat aatgtcaggt tatgggaagc tggctggaag
1620
cagcgggtact acaagaacaa atttgatgtg gatgcagctg atgagaaatt ccgtcggaaa
1680
gttgtgcagt cgtacgttga aggactttgc tgggttctta gatattatta ccagggtctg
1740
gcttcttgga agtgggatta tccatttcat tatgcacat ttgcttcaga ctttgaaggc
1800
attgcagaca tgccatctga ttttgagaag ggtacgaaac cgtttaaacc actagaacaa
1860
cttatggggg tatttccagc tgcaagtggg aattttctac ctccatcatg gcggaagctc
1920
atgagtgatc ctgattctag tataattgac ttctatcctg aagattttgc tattgatttg
1980
aatgggaaga aatatgcatg gcaagggtgt gctctcttgc cattcgtgga tgagcgaagg
2040

ctacgagctg ccctagaaga ggtataccca gacctcactc cagaagagac cagaagaaac
2100
agccttggag gtgatgtctt atttgtggg aaacatcacc cactccatga cttcatttta
2160
gagctgtacc agacaggttc cacagagcca gtggaggtag ccctgaact atgtcatggg
2220
attcaaggaa agttttcttt ggatgaagaa gccattcttc cagatcaa atgtatgttct
2280
cctgttccta tgtaaggga tctgacacag aacactgtag tcagtattaa ttttaagac
2340
ccacagtttg ctgaagatta cttttttaa gctgtaatgc ttccaggagc aagaaagcca
2400
gcagcagtag tgaaacctag tgactgggaa aaatccagca atggacggca gtggaagcct
2460
cagcttggct ttaacctga ccggaggcct gtgcacctgg atcaggcagc cttcaggact
2520
ttgggccatg tgatgccaag aggtcagga actggcattt acagcaatgc tgcaccacca
2580
cctgtgactt accaggga cttatacagg ccgcttttga gaggacaagc ccagattcca
2640
aaacttatgt caaatatgag gccccaggat tcctggcgag gtcctcctcc cttttccag
2700
cagcaaaggt ttgacagagg cgttggggct gaacctctgc tcccatggaa ccggatgctg
2760
caaaccaga atgcagcctt ccagccaaac cagtaccaga tgctagctgg gcctgggtggg
2820
tatccacca gacgagatga tcgtggaggg agacagggat atcccagaga aggaaggaaa
2880
taccctttgc caccacctc aggaagatac aattggaatt aagcttttgt aaagctttcc
2940
caaactcctt catcattcta cagttttatg ctatttggg aaagatttct ttctcaagta
3000
gtagttttta ataaaactac agtactttgt gtatttcttt taactgtgta ttttctact
3060
gatctgatct cactgtttat gttgctttcc aaagatgtat gttgcataat acagtggatc
3120
tgaatttatt attgcttata aaacacattt gatggaatag gagtactggg ttttcataat
3180
ggttaaaaaa gaaaccagct gtggatttca aaacacagtg tattctagat catctaagat
3240
ccatgctgat ttttattgca caagaattag gtttgaactc ttgagctgga acctcagcaa
3300
actagagtat atattgttca gtatttcttt ggaaacattt cattaatgta cttgtcttac
3360
agaaatttct gaactttagt aaaaaaaaat aaagttaaac ttttaaaact caaaaaaaaa
3420
aaaaaaaaa a
3431

<210> 5012

<211> 950

<212> PRT

<213> Homo sapiens

<400> 5012

```

Met Gly Val Pro Ala Phe Phe Arg Trp Leu Ser Arg Lys Tyr Pro Ser
 1              5              10              15
Ile Ile Val Asn Cys Val Glu Glu Lys Pro Lys Glu Cys Asn Gly Val
      20              25              30
Lys Ile Pro Val Asp Ala Ser Lys Pro Asn Pro Asn Asp Val Glu Phe
      35              40              45
Asp Asn Leu Tyr Leu Asp Met Asn Gly Ile Ile His Pro Cys Thr His
      50              55              60
Pro Glu Asp Lys Pro Ala Pro Lys Asn Glu Asp Glu Met Met Val Ala
65              70              75              80
Ile Phe Glu Tyr Ile Asp Arg Leu Phe Ser Ile Val Arg Pro Arg Arg
      85              90              95
Leu Leu Tyr Met Ala Ile Asp Gly Val Ala Pro Arg Val Lys Met Asn
      100             105             110
Gln Gln Arg Ser Arg Arg Phe Arg Ala Ile Lys Glu Gly Met Glu Ala
      115             120             125
Ala Val Glu Lys Gln Arg Val Arg Glu Glu Ile Leu Ala Lys Gly Gly
      130             135             140
Phe Leu Pro Pro Glu Glu Ile Lys Glu Arg Phe Asp Ser Asn Cys Ile
145             150             155             160
Thr Pro Gly Thr Glu Phe Met Asp Asn Leu Ala Lys Cys Leu Arg Tyr
      165             170             175
Tyr Ile Ala Asp Arg Leu Asn Asn Asp Pro Gly Trp Lys Asn Leu Thr
      180             185             190
Val Ile Leu Ser Asp Ala Ser Ala Pro Gly Glu Gly Glu His Lys Ile
      195             200             205
Met Asp Tyr Ile Arg Arg Gln Arg Ala Gln Pro Asn His Asp Pro Asn
210             215             220
Thr His His Cys Leu Cys Gly Ala Asp Ala Asp Leu Ile Met Leu Gly
225             230             235             240
Leu Ala Thr His Glu Pro Asn Phe Thr Ile Ile Arg Glu Glu Phe Lys
      245             250             255
Pro Asn Lys Pro Lys Pro Cys Gly Leu Cys Asn Gln Phe Gly His Glu
      260             265             270
Val Lys Asp Cys Glu Gly Leu Pro Arg Glu Lys Lys Gly Lys His Asp
      275             280             285
Glu Leu Ala Asp Ser Leu Pro Cys Ala Glu Gly Glu Phe Ile Phe Leu
290             295             300
Arg Leu Asn Val Leu Arg Glu Tyr Leu Glu Arg Glu Leu Thr Met Ala
305             310             315             320
Ser Leu Pro Phe Thr Phe Asp Val Glu Arg Ser Ile Asp Asp Trp Val
      325             330             335
Phe Met Cys Phe Phe Val Gly Asn Asp Phe Leu Pro His Leu Pro Ser
      340             345             350
Leu Glu Ile Arg Glu Asn Ala Ile Asp Arg Leu Val Asn Ile Tyr Lys
      355             360             365
Asn Val Val His Lys Thr Gly Gly Tyr Leu Thr Glu Ser Gly Tyr Val
      370             375             380
Asn Leu Gln Arg Val Gln Met Ile Met Leu Ala Val Gly Glu Val Glu
385             390             395             400
Asp Ser Ile Phe Lys Lys Arg Lys Asp Asp Glu Asp Ser Phe Arg Arg
      405             410             415
Arg Gln Lys Glu Lys Arg Lys Arg Met Lys Arg Asp Gln Pro Ala Phe

```

420 425 430
 Thr Pro Ser Gly Ile Leu Thr Pro His Ala Leu Gly Ser Arg Asn Ser
 435 440 445
 Pro Gly Ser Gln Val Ala Ser Asn Pro Arg Gln Ala Ala Tyr Glu Met
 450 455 460
 Arg Met Gln Asn Asn Ser Ser Pro Ser Ile Ser Pro Asn Thr Ser Phe
 465 470 475 480
 Thr Ser Asp Gly Ser Pro Ser Pro Leu Gly Gly Ile Lys Arg Lys Ala
 485 490 495
 Glu Asp Ser Asp Ser Glu Pro Glu Pro Glu Asp Asn Val Arg Leu Trp
 500 505 510
 Glu Ala Gly Trp Lys Gln Arg Tyr Tyr Lys Asn Lys Phe Asp Val Asp
 515 520 525
 Ala Ala Asp Glu Lys Phe Arg Lys Val Val Gln Ser Tyr Val Glu
 530 535 540
 Gly Leu Cys Trp Val Leu Arg Tyr Tyr Tyr Gln Gly Cys Ala Ser Trp
 545 550 555 560
 Lys Trp Tyr Tyr Pro Phe His Tyr Ala Pro Phe Ala Ser Asp Phe Glu
 565 570 575
 Gly Ile Ala Asp Met Pro Ser Asp Phe Glu Lys Gly Thr Lys Pro Phe
 580 585 590
 Lys Pro Leu Glu Gln Leu Met Gly Val Phe Pro Ala Ala Ser Gly Asn
 595 600 605
 Phe Leu Pro Pro Ser Trp Arg Lys Leu Met Ser Asp Pro Asp Ser Ser
 610 615 620
 Ile Ile Asp Phe Tyr Pro Glu Asp Phe Ala Ile Asp Leu Asn Gly Lys
 625 630 635 640
 Lys Tyr Ala Trp Gln Gly Val Ala Leu Leu Pro Phe Val Asp Glu Arg
 645 650 655
 Arg Leu Arg Ala Ala Leu Glu Glu Val Tyr Pro Asp Leu Thr Pro Glu
 660 665 670
 Glu Thr Arg Arg Asn Ser Leu Gly Gly Asp Val Leu Phe Val Gly Lys
 675 680 685
 His His Pro Leu His Asp Phe Ile Leu Glu Leu Tyr Gln Thr Gly Ser
 690 695 700
 Thr Glu Pro Val Glu Val Pro Pro Glu Leu Cys His Gly Ile Gln Gly
 705 710 715 720
 Lys Phe Ser Leu Asp Glu Glu Ala Ile Leu Pro Asp Gln Ile Val Cys
 725 730 735
 Ser Pro Val Pro Met Leu Arg Asp Leu Thr Gln Asn Thr Val Val Ser
 740 745 750
 Ile Asn Phe Lys Asp Pro Gln Phe Ala Glu Asp Tyr Ile Phe Lys Ala
 755 760 765
 Val Met Leu Pro Gly Ala Arg Lys Pro Ala Ala Val Leu Lys Pro Ser
 770 775 780
 Asp Trp Glu Lys Ser Ser Asn Gly Arg Gln Trp Lys Pro Gln Leu Gly
 785 790 795 800
 Phe Asn Arg Asp Arg Arg Pro Val His Leu Asp Gln Ala Ala Phe Arg
 805 810 815
 Thr Leu Gly His Val Met Pro Arg Gly Ser Gly Thr Gly Ile Tyr Ser
 820 825 830
 Asn Ala Ala Pro Pro Pro Val Thr Tyr Gln Gly Asn Leu Tyr Arg Pro
 835 840 845
 Leu Leu Arg Gly Gln Ala Gln Ile Pro Lys Leu Met Ser Asn Met Arg

850	855	860
Pro Gln Asp Ser Trp Arg Gly Pro Pro Pro Leu Phe Gln Gln Gln Arg		
865	870	875
Phe Asp Arg Gly Val Gly Ala Glu Pro Leu Leu Pro Trp Asn Arg Met		880
	885	890
Leu Gln Thr Gln Asn Ala Ala Phe Gln Pro Asn Gln Tyr Gln Met Leu		895
	900	905
Ala Gly Pro Gly Gly Tyr Pro Pro Arg Arg Asp Asp Arg Gly Gly Arg		910
	915	920
Gln Gly Tyr Pro Arg Glu Gly Arg Lys Tyr Pro Leu Pro Pro Pro Ser		925
	930	935
Gly Arg Tyr Asn Trp Asn		940
945	950	

<210> 5013

<211> 2480

<212> DNA

<213> Homo sapiens

<400> 5013

```

nccggggcgg agctcgcgat agcgaccggg agcagggcgc ggggcgggac ccaggtccga
60
ggcgaggaag ccggaagcca ggcgcgggga gcctccccct tcgactgcag cctcgctccg
120
tgccttctgc ggccttggga tcccggagcc tgcctagggt ctgtgcgctc ccgcccaggc
180
cgggtccccgc cgcccgcctg cgcccaggc aggtcccagg cctccggctg ctcccggccg
240
aagggtggga caggcagtgg caggcaccac tagcgagggc gtttggaac ccagggtgac
300
cacggcgag ccattggggac cgcgcttggt taccatgagg acatgacggc caccggctg
360
ctctgggacg accccgagtg cgagatcgag cgctctgagc gcctgaccgc agccctggat
420
cgcttgcggc agcgcgccct ggaacagagg tgtctgcggt tgcagcccg cgaggcctcg
480
gaagaggagc tgggcctggt gcacagccca gattatgtat ccctggtcag ggagaccag
540
gtcctaggca aggaggagct gcaggcgctg tccggacagt tcgacgcat ctacttcac
600
ccgagtacct ttcactgcgc gcggctggcc gcaggggctg gactgcagct ggtggacgct
660
gtgctcactg gagctgtgca aaatgggctt gccctgggtg ggcctcccgg gcaccatggc
720
cagagggcgg ctgccaacgg gttctgtgtg ttcaacaacg tggccatagc agctgcacat
780
gccaagcaga aacacgggct acacaggatc ctgcctgtgg actgggatgt gcaccatggc
840
caggggatcc agtatctctt tgaggatgac ccagcgtcc ttactttctc ctggcaccgc
900
tatgagcatg ggcgcttctg gcctttcctg cgagagtcag atgcagacgc agtggggcgg
960
ggacagggcc tcggcttcac tgtcaacctg ccctggaacc aggttgggat gggaaacgct
1020

```

gactacgtgg ctgccttcct gcacctgctg ctcccactgg cctttgagtt tgacctgag
1080
ctgggtgctgg tctcggcagg atttgactca gccatcgggg accctgaggg gcaaagtgcag
1140
gccacgccag agtgcttcgc ccacctcaca cagctgctgc aggtgctggc cggcggccgg
1200
gtctgtgccg tgctggaggg cggctaccac ctggagtcac tggcggagtc agtgtgcatg
1260
acagtacaga cgctgctggg tgacccggcc ccacctctgt cagggccaat ggcgccatgt
1320
cagaggtgcg aggggagtg cctagagtcc atccagagt cccgtgctgc ccaggccccg
1380
cactggaaga gcctccagca gcaagatgtg accgctgtgc cgatgagccc cagcagccac
1440
tccccagagg ggaggcctcc acctctgctg cctgggggtc cagtgtgtaa ggcagctgca
1500
tctgcaccga gctccctcct ggaccagccg tgcctctgcc ccgcacctc tgtccgcacc
1560
gctgttgccc tgacaacgcc ggatatcaca ttggttctgc cccctgacgt catccaacag
1620
gaagcgtcag ccctgagggg ggagacagaa gcctgggcca ggccacacga gtccctggcc
1680
cgggaggagg ccctcactgc acttgggaag ctctgtacc tcttagatgg gatgctggat
1740
gggcaggtga acagtggat agcagccact ccagcctctg ctgcagcage caccctggat
1800
gtggctgttc ggagaggcct gtcccacgga gccagaggc tgctgtgcgt ggccctggga
1860
cagctggacc ggctccaga cctcgcccat gacgggagga gtctgtggct gaacatcagg
1920
ggcaaggagg cggctgcct atccatgttc catgtctcca cgcactgcc agtgatgacc
1980
ggtggtttcc tgagctgcat ctggggcttg gtgctgcccc tggcctatgg ctccagcct
2040
gacctggtgc tgggtggcgt ggggcctggc catggcctgc agggccccc cgtgcactc
2100
ctggctgcaa tgcttcgggg gctggcagg ggccaggtcc tggccctcct ggaggaggtg
2160
agctgggcag ggtggaggtg ctgcggggtg ggacgagggg aaggaccagt gactgcttcc
2220
gtcttcgccc ctggtccaga actccacacc ccagctagca gggatcctgg cccgggtgct
2280
gaatggagag gcacctccta gcctaggccc ttcctctgtg gcctccccag aggacgtcca
2340
ggccctgatg tacctgagag ggcagctgga gcctcagtgg aagatgttgc agtgccatcc
2400
tcacctggtg gcttgaaatc ggccaagggt ggagcattta caccgcagaa atgacaccgc
2460
acgccagcgc cccgcggccg
2480

<210> 5014

<211> 675

<212> PRT

<213> Homo sapiens

<400> 5014

```

Arg Gly Arg Leu Gly Thr Gln Gly Asp His Gly Ala Ala Met Gly Thr
 1           5           10           15
Ala Leu Val Tyr His Glu Asp Met Thr Ala Thr Arg Leu Leu Trp Asp
 20           25           30
Asp Pro Glu Cys Glu Ile Glu Arg Pro Glu Arg Leu Thr Ala Ala Leu
 35           40           45
Asp Arg Leu Arg Gln Arg Gly Leu Glu Gln Arg Cys Leu Arg Leu Ser
 50           55           60
Ala Arg Glu Ala Ser Glu Glu Leu Gly Leu Val His Ser Pro Glu
 65           70           75           80
Tyr Val Ser Leu Val Arg Glu Thr Gln Val Leu Gly Lys Glu Glu Leu
 85           90           95
Gln Ala Leu Ser Gly Gln Phe Asp Ala Ile Tyr Phe His Pro Ser Thr
 100          105          110
Phe His Cys Ala Arg Leu Ala Ala Gly Ala Gly Leu Gln Leu Val Asp
 115          120          125
Ala Val Leu Thr Gly Ala Val Gln Asn Gly Leu Ala Leu Val Arg Pro
 130          135          140
Pro Gly His His Gly Gln Arg Ala Ala Ala Asn Gly Phe Cys Val Phe
 145          150          155          160
Asn Asn Val Ala Ile Ala Ala Ala His Ala Lys Gln Lys His Gly Leu
 165          170          175
His Arg Ile Leu Val Val Asp Trp Asp Val His His Gly Gln Gly Ile
 180          185          190
Gln Tyr Leu Phe Glu Asp Asp Pro Ser Val Leu Tyr Phe Ser Trp His
 195          200          205
Arg Tyr Glu His Gly Arg Phe Trp Pro Phe Leu Arg Glu Ser Asp Ala
 210          215          220
Asp Ala Val Gly Arg Gly Gln Gly Leu Gly Phe Thr Val Asn Leu Pro
 225          230          235          240
Trp Asn Gln Val Gly Met Gly Asn Ala Asp Tyr Val Ala Ala Phe Leu
 245          250          255
His Leu Leu Leu Pro Leu Ala Phe Glu Phe Asp Pro Glu Leu Val Leu
 260          265          270
Val Ser Ala Gly Phe Asp Ser Ala Ile Gly Asp Pro Glu Gly Gln Met
 275          280          285
Gln Ala Thr Pro Glu Cys Phe Ala His Leu Thr Gln Leu Leu Gln Val
 290          295          300
Leu Ala Gly Gly Arg Val Cys Ala Val Leu Glu Gly Gly Tyr His Leu
 305          310          315          320
Glu Ser Leu Ala Glu Ser Val Cys Met Thr Val Gln Thr Leu Leu Gly
 325          330          335
Asp Pro Ala Pro Pro Leu Ser Gly Pro Met Ala Pro Cys Gln Arg Cys
 340          345          350
Glu Gly Ser Ala Leu Glu Ser Ile Gln Ser Ala Arg Ala Ala Gln Ala
 355          360          365
Pro His Trp Lys Ser Leu Gln Gln Gln Asp Val Thr Ala Val Pro Met
 370          375          380
Ser Pro Ser Ser His Ser Pro Glu Gly Arg Pro Pro Pro Leu Leu Pro
 385          390          395          400
Gly Gly Pro Val Cys Lys Ala Ala Ala Ser Ala Pro Ser Ser Leu Leu

```

405 410 415
 Asp Gln Pro Cys Leu Cys Pro Ala Pro Ser Val Arg Thr Ala Val Ala
 420 425 430
 Leu Thr Thr Pro Asp Ile Thr Leu Val Leu Pro Pro Asp Val Ile Gln
 435 440 445
 Gln Glu Ala Ser Ala Leu Arg Glu Glu Thr Glu Ala Trp Ala Arg Pro
 450 455 460
 His Glu Ser Leu Ala Arg Glu Glu Ala Leu Thr Ala Leu Gly Lys Leu
 465 470 475 480
 Leu Tyr Leu Leu Asp Gly Met Leu Asp Gly Gln Val Asn Ser Gly Ile
 485 490 495
 Ala Ala Thr Pro Ala Ser Ala Ala Ala Thr Leu Asp Val Ala Val
 500 505 510
 Arg Arg Gly Leu Ser His Gly Ala Gln Arg Leu Leu Cys Val Ala Leu
 515 520 525
 Gly Gln Leu Asp Arg Pro Pro Asp Leu Ala His Asp Gly Arg Ser Leu
 530 535 540
 Trp Leu Asn Ile Arg Gly Lys Glu Ala Ala Ala Leu Ser Met Phe His
 545 550 555 560
 Val Ser Thr Pro Leu Pro Val Met Thr Gly Gly Phe Leu Ser Cys Ile
 565 570 575
 Leu Gly Leu Val Leu Pro Leu Ala Tyr Gly Phe Gln Pro Asp Leu Val
 580 585 590
 Leu Val Ala Leu Gly Pro Gly His Gly Leu Gln Gly Pro His Ala Ala
 595 600 605
 Leu Leu Ala Ala Met Leu Arg Gly Leu Ala Gly Gly Arg Val Leu Ala
 610 615 620
 Leu Leu Glu Glu Val Ser Trp Ala Gly Trp Arg Cys Cys Gly Val Gly
 625 630 635 640
 Arg Gly Glu Gly Pro Val Thr Ala Ser Val Phe Ala Pro Gly Pro Glu
 645 650 655
 Leu His Thr Pro Ala Ser Arg Asp Pro Gly Pro Gly Ala Glu Trp Arg
 660 665 670
 Gly Thr Ser
 675

<210> 5015

<211> 1360

<212> DNA

<213> Homo sapiens

<400> 5015

atgagcgcgc cctggaggcg agccaggccc gtcaccacct cccagcggcc ccgcccctcc
 60
 ccgcagggtcc ctccccctctc cgcaggcccc gccgcccgcg ccatctttgt tgggggcagc
 120
 caggcctggc tcgagatgcc gaagtcgtgc gcggcccggc agtgctgcaa ccgctacagc
 180
 agccgcagga agcagctcac cttccaccgg ttccggttca gccgcccgga gctgctgaag
 240
 gaatgggtgc tgaacatcgg ccgggggcaac ttcaagccca agcagcacac ggcatctgc
 300
 tccgagcact tccggccaga gtgcttcagc gcctttggaa accgcaagaa cctaaagcac
 360

aatgccgtgc ccacggtggt cgcctttcag gacccacac agcaggtgag ggagaacaca
 420
 gaccctgccca gtgagagagg aaatgccagc tcttctcaga aagaaaaggt cctccctgag
 480
 gcgggggccc gagaggacag tcttgggaga aacatggaca ctgcacttga agagcttcag
 540
 ttgcccccaa atgccgaagg ccacgtaaaa caggtctcgc cacggaggcc gcaagcaaca
 600
 gaggtctgtg gccggccgac tggccctgca ggcctgagaa ggacccccaa caagcagcca
 660
 tctgatcaca gctatgccct tttggactta gattccctga agaaaaaact cttcctcact
 720
 ctgaaggaaa atgaaaagct ccggaagcgc ttgcaggccc agaggctggt gatgcgaagg
 780
 atgtccagcc gcctccgtgc ttgcaaaggg caccggggac tccaggccag acttgggcca
 840
 gagcagcaga gctgagcccc acaggctccg gacgcagagg tggcagtggc accagggccc
 900
 gcagagcttt ggagctctgg ctgtggacat ttttgtctgc tgtggacact gagaaagttg
 960
 gccatgaggc ctgcttgccc ggggatcgag acagtagcca agctccccgg cgagagcccc
 1020
 aatgccgtct gggggacgtt tagaggcgtg gcactaggag tgcacatctg tgagcatgac
 1080
 aagcttatcc tcccatggta acagaagtcc aggctgaggc tgattctgga cgctgtcctt
 1140
 tcagcacacg cagagcaaag atcgttgga gccccagtgt gggagatgct cctcagggag
 1200
 gaagccatgt gagggggctg gctctgtggc gggtagtggt tccccctctc catcagcctg
 1260
 gacagccgct cggggttcta aggagtgact cctgtcccgg cctgggtgtga gtgggcagtg
 1320
 taataaagtg tctttctata cggaaaaaaa aaaaaaaaaa
 1360

<210> 5016

<211> 284

<212> PRT

<213> Homo sapiens

<400> 5016

Met	Ser	Ala	Pro	Trp	Arg	Arg	Ala	Arg	Pro	Val	Thr	Thr	Ser	Gln	Arg
1				5					10					15	
Pro	Arg	Pro	Ser	Pro	Gln	Val	Pro	Pro	Leu	Ser	Ala	Gly	Pro	Ala	Ala
		20						25					30		
Ala	Ala	Ile	Phe	Val	Gly	Gly	Ser	Gln	Ala	Trp	Leu	Glu	Met	Pro	Lys
		35					40					45			
Ser	Cys	Ala	Ala	Arg	Gln	Cys	Cys	Asn	Arg	Tyr	Ser	Ser	Arg	Arg	Lys
	50					55				60					
Gln	Leu	Thr	Phe	His	Arg	Phe	Pro	Phe	Ser	Arg	Pro	Glu	Leu	Leu	Lys
65				70					75					80	
Glu	Trp	Val	Leu	Asn	Ile	Gly	Arg	Gly	Asn	Phe	Lys	Pro	Lys	Gln	His
			85					90					95		
Thr	Val	Ile	Cys	Ser	Glu	His	Phe	Arg	Pro	Glu	Cys	Phe	Ser	Ala	Phe

```
<210> 5017
<211> 785
<212> DNA
<213> Homo sapiens
```

4196

tagcgttctg tctcattacg agcaaataaa tagactttca ttggaaaaaa aaaaaaaaaa
 780
 aaaaaa
 785

<210> 5018
 <211> 63
 <212> PRT
 <213> Homo sapiens

<400> 5018
 Gly Pro Ser Ala Ser Glu Gly Arg Asp Ala Val Ser Ala Ala Gly Ala
 1 5 10 15
 Ser His Thr Ser Ser Ile Leu Ser Thr Leu His Ser Lys Cys Cys Leu
 20 25 30
 Leu Pro Ala Leu Pro Ser Asp Ala Gly Val Gly Trp Gly Ala Glu Gly
 35 40 45
 Pro Pro Ser Ile Ala Ala Val Ser Gln Ser His Gly Arg Arg Ser
 50 55 60

<210> 5019
 <211> 2766
 <212> DNA
 <213> Homo sapiens

<400> 5019
 nngctcgagt actggcgaag acgagaagaa gaggagcggt ggagaatgga aatgagacgt
 60
 tatgaagagg acatgtactg gaggagaatg gaggaagaac aacatcattg ggatgatcgc
 120
 cgccgaatgc cagatggagg ttatcctcat ggtcctccag gccattagg ccttctggga
 180
 gtcgaccag gcatgcctcc tcagcctcag gggcctgcac ccttacgtcg tcctgactca
 240
 tctgatgacc gttatgtaat gacaaaacat gccaccattt atccaactga agaggagtta
 300
 caggcagttc agaaaattgt ttctattact gaacgtgctt taaaactcgt ttcagacagt
 360
 ttgtctgaac atgagaagaa caagaacaaa gagggagatg ataagaaaga gggaggtaaa
 420
 gacagagctt tgaaaggagt tttgcgagtg ggagtatttg caaaaggatt acttctccga
 480
 ggagatagaa atgtcaacct tgttttgctg tgctcagaga aaccttcaaa gacattatta
 540
 agccgtattg cagaaaacct acccaaacag cttgctttta taagccctga gaagtatgac
 600
 ataaaatgtg ctgtatctga agcggcaata attttgaatt catgtgtgga acccaaatg
 660
 caagtcacta tcacactgac atctccaatt attcgagaag agaacatgag ggaaggagat
 720
 gtaacctcgg gtatggtgaa agaccaccg gacgtcttgg acaggcaaaa atgccttgac
 780
 gctctggctg ctctacgcca cgctaagtgg ttccaggcta gagctaattg tctgcagtcc
 840

tgtgtgatta tcatacgcat tcttcgagac ctctgtcagc gagttccaac ttggtctgat
900
tttccaagct gggctatgga gttactagta gagaaagcaa tcagcagtgc ttctagccct
960
cagagccctg gggatgcact gagaagagtt ttggaatgca tttcttcagg gattattctt
1020
aaaggtagtc ctggacttct ggatccttgt gaaaaggatc cctttgatac cttggcaaca
1080
atgactgacc agcagcgtga agacatcaca tccagtgcac agtttgcatc gagactcctt
1140
gcattccgcc agatacacia agttctaggc atggatccat taccgcaaag gagccaacgt
1200
tttaacatcc acaacaacag gaaacgaaga agagatagtg atggagttga tggatttgaa
1260
gctgagggga aaaaagacaa aaaagattat gataactttt aaaaagtgtc tgtaaattctt
1320
cagtgttaaa aaaacagatg cccatttgtt ggctgttttt cattcataat aatgtctaca
1380
ttgaaaaatt tatcaagaat ttaaaggatt tcatggaaga accaagtttt tctatgatat
1440
taaaaaatgt acagtgttag gtattatttg aatggaaaga caccacaaaa aaaaatgtgc
1500
tccgactagg gggaaaacag tagttccgat tttttcccat ttttttatt ttattttctg
1560
gttgccttag cttccccccc ttttttctg tcttttatta actagtgcac tgtcttatta
1620
aatcttcact gtatttaatz caggatgtgt gcttcagttg ctctgtgtat tttgatattt
1680
taatttagag gttttgtttg ctttttgaca ctagttgtaa gttactttgt tatagatggt
1740
atcctttacc cttctttaat attttacagc agtacgtttt tttgtaacgt gagactgcag
1800
agtttgtttt tctatatgtg aaggattaca acacaaaaag ttatcctgcc attcagatgc
1860
tcagaactga atgtttctgc agatcttctg gcatttctct ctagtgtgat atataaagg
1920
gtaattaaga cagagtcttg ttaatctaaz caagtttgct gttagtgtg cattagcagt
1980
ataaaaagcta atataacta tatggctctg caacagtttt aaagcctctg cataattgat
2040
aataaaaaatg catgacattc ttgtttttta tagactttta aaatcataat tttaggttta
2100
acacgtagat ctttgtacag ttgacttttt gacatagcaa ggccaaaaat aactttctga
2160
atattttttt cttgtgtata agtggaagg gcatttttca catataagtg ggctaaccac
2220
tattttcaaa agaacttcat cattgtacaa ctaacaacag taactagccc ttaattatgg
2280
tgacagtcc ttattggtgt gtgtgagatt actctagcaa ctattacagt ataacacaga
2340
tgatcttctc cacacacccc atcaccaga taatttacag ttctgttaac agtgaggtg
2400
ataaagtatt actgataaaa aattatctaa ggaaaaaac agaaaattat ttggtgtggc
2460

catcttacct gcttatgtct cctacacaaa gctaaatatt ctagcagtga tgtaatgaaa
 2520
 aattacatct tactgttgat atatgtatgc tctggtacac agatgtcatt ttgttgtcac
 2580
 agcactacag tgaaatacac aaaaaatgaa attcatataa tgacttaaatt gtattatatg
 2640
 ttagaattga caacataaac tacttttgct ttgaaatgat gtatgcttca gtaaaatcat
 2700
 attcaaattt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2760
 aaaaaa
 2766

<210> 5020
 <211> 433
 <212> PRT
 <213> Homo sapiens

<400> 5020
 Xaa Leu Glu Tyr Trp Arg Arg Arg Glu Glu Glu Glu Arg Trp Arg Met
 1 5 10 15
 Glu Met Arg Arg Tyr Glu Glu Asp Met Tyr Trp Arg Arg Met Glu Glu
 20 25 30
 Glu Gln His His Trp Asp Asp Arg Arg Arg Met Pro Asp Gly Gly Tyr
 35 40 45
 Pro His Gly Pro Pro Gly Pro Leu Gly Leu Leu Gly Val Arg Pro Gly
 50 55 60
 Met Pro Pro Gln Pro Gln Gly Pro Ala Pro Leu Arg Arg Pro Asp Ser
 65 70 75 80
 Ser Asp Asp Arg Tyr Val Met Thr Lys His Ala Thr Ile Tyr Pro Thr
 85 90 95
 Glu Glu Glu Leu Gln Ala Val Gln Lys Ile Val Ser Ile Thr Glu Arg
 100 105 110
 Ala Leu Lys Leu Val Ser Asp Ser Leu Ser Glu His Glu Lys Asn Lys
 115 120 125
 Asn Lys Glu Gly Asp Asp Lys Lys Glu Gly Gly Lys Asp Arg Ala Leu
 130 135 140
 Lys Gly Val Leu Arg Val Gly Val Phe Ala Lys Gly Leu Leu Leu Arg
 145 150 155 160
 Gly Asp Arg Asn Val Asn Leu Val Leu Leu Cys Ser Glu Lys Pro Ser
 165 170 175
 Lys Thr Leu Leu Ser Arg Ile Ala Glu Asn Leu Pro Lys Gln Leu Ala
 180 185 190
 Phe Ile Ser Pro Glu Lys Tyr Asp Ile Lys Cys Ala Val Ser Glu Ala
 195 200 205
 Ala Ile Ile Leu Asn Ser Cys Val Glu Pro Lys Met Gln Val Thr Ile
 210 215 220
 Thr Leu Thr Ser Pro Ile Ile Arg Glu Glu Asn Met Arg Glu Gly Asp
 225 230 235 240
 Val Thr Ser Gly Met Val Lys Asp Pro Pro Asp Val Leu Asp Arg Gln
 245 250 255
 Lys Cys Leu Asp Ala Leu Ala Ala Leu Arg His Ala Lys Trp Phe Gln
 260 265 270
 Ala Arg Ala Asn Gly Leu Gln Ser Cys Val Ile Ile Ile Arg Ile Leu

275 280 285
 Arg Asp Leu Cys Gln Arg Val Pro Thr Trp Ser Asp Phe Pro Ser Trp
 290 295 300
 Ala Met Glu Leu Leu Val Glu Lys Ala Ile Ser Ser Ala Ser Ser Pro
 305 310 315 320
 Gln Ser Pro Gly Asp Ala Leu Arg Arg Val Phe Glu Cys Ile Ser Ser
 325 330 335
 Gly Ile Ile Leu Lys Gly Ser Pro Gly Leu Leu Asp Pro Cys Glu Lys
 340 345 350
 Asp Pro Phe Asp Thr Leu Ala Thr Met Thr Asp Gln Gln Arg Glu Asp
 355 360 365
 Ile Thr Ser Ser Ala Gln Phe Ala Leu Arg Leu Leu Ala Phe Arg Gln
 370 375 380
 Ile His Lys Val Leu Gly Met Asp Pro Leu Pro Gln Met Ser Gln Arg
 385 390 395 400
 Phe Asn Ile His Asn Asn Arg Lys Arg Arg Arg Asp Ser Asp Gly Val
 405 410 415
 Asp Gly Phe Glu Ala Glu Gly Lys Lys Asp Lys Lys Asp Tyr Asp Asn
 420 425 430
 Phe

<210> 5021

<211> 494

<212> DNA

<213> Homo sapiens

<400> 5021

ntcacatgacag cctaccattg aatttacaat tctgatatta atgaaatata tctataaagg
 60
 gttgaagtgt cttcctgcaa caattgccaa ggaacaaaat tgtcaattta ttaatgaaac
 120
 atgacgtgtg ttgaacaaga caagctgggt caagcatttg aagatgcttt tgaggttctg
 180
 agccaacatt caactggaga tcttcagtac tcgccagatt acaaaaatta cctggcttta
 240
 atcaaccatc gtcctcatgt caaaggaaat tccagctgct atggagtgtt gcctacagag
 300
 gagcctgtct ataattggag aacggtaatt aacagtgtg cggacttcta ttttgaagga
 360
 aatattcatc aatctctgca gaacataact gaaaaccagc tggtaacaacc cactattctc
 420
 cagcaaaaagg ggggaaaagg caggaagaag cttagactgt ttgaatacct tcacgaatcc
 480
 ctgtgtaatc cgga
 494

<210> 5022

<211> 124

<212> PRT

<213> Homo sapiens

<400> 5022

Met Thr Cys Val Glu Gln Asp Lys Leu Gly Gln Ala Phe Glu Asp Ala

1	5	10	15
Phe Glu Val	Leu Arg Gln His Ser Thr Gly Asp	Leu Gln Tyr Ser Pro	
	20	25	30
Asp Tyr Lys	Asn Tyr Leu Ala Leu Ile Asn His Arg	Pro His Val Lys	
	35	40	45
Gly Asn Ser	Ser Cys Tyr Gly Val Leu Pro Thr Glu Glu	Pro Val Tyr	
	50	55	60
Asn Trp Arg	Thr Val Ile Asn Ser Ala Ala Asp Phe Tyr Phe	Glu Gly	
65		70	75
Asn Ile His	Gln Ser Leu Gln Asn Ile Thr Glu Asn Gln	Leu Val Gln	
	85	90	95
Pro Thr Ile	Leu Gln Gln Lys Gly Gly Lys Gly Arg Lys	Lys Leu Arg	
	100	105	110
Leu Phe Glu	Tyr Leu His Glu Ser Leu Cys Asn Pro		
	115	120	

<210> 5023

<211> 3482

<212> DNA

<213> Homo sapiens

<400> 5023

```

gggcccgcgc agaggcccg cgcagcgcga ggaagcctg gggccagag gtcgcgctg
60
ccgccatgcc gctgctcttc ctgagcgcgt tccctggcc cagcctccgc acctacacgg
120
gcctcagcgg cctggccctg ctgggcacca tcatcagcgc ctaccgcgcg ctccagccagc
180
ccgaggcccg ccccggcgag ccggaccagc taacggcctc gctgcagcct gagccgccgg
240
cgcccccccg gccgagcgcg gggggacccc gggccgcga tgtggccag tacctgctct
300
cagacagcct cttcgtgtgg gttctagtaa ataccgcttg ctgtgttttg atgttggtg
360
ctaagctcat ccagtgtatt gtgtttggcc ctcttcgagt gagtgagaga cagcatctca
420
aagacaaatt ttggaatttt attttctaca agttcatttt catctttggt gtgctgaatg
480
tccagacagt ggaagaggtg gtcattgtgt gcctctggtt tgccggactt gtctttctgc
540
acctgatggt tcagctctgc aaggatcgat ttgaatatct ttccttctcg cccaccacgc
600
cgatgagcag ccacggtcga gtccgtgtcc tgttggttgc catgctgctt tctgctgtg
660
gactggcggc cgtctgtccc atcaccggct acaccacgg aatgcacacc ttggctttca
720
tggctgcaga gtctcttctt gtgacagtga ggactgctca tgtgatttta cgatacgtaa
780
ttcacctctg ggacctcaac cacgaagga cgtgggaagg aaaggggacg tatgtctatt
840
acacagactt tgtcatggag ctactctcc tgcctctgga cctcatgcac catattcaca
900
tggtgttatt tggcaacatc tggttatcca tggccagcct ggtcatcttt atgcagctgc
960

```

gttacctgtt tcatgagggt caacgtcgaa ttcgtcggca caagaactat ctacgtgtgg
1020
ttggaaacat ggaggccagg tttgcagttg caactccaga ggagctggct gtcaacaatg
1080
acgactgtgc catctgttgg gactccatgc aggtgcgcg gaaactgccc tgtggacatc
1140
ttttccacaa ctctgtctt cgttcctggc tagaacaaga cacctcctgt ccaacatgca
1200
gaatgtctct taatattgcc gacaataatc gtgtcagggg agaacatcaa ggagagaact
1260
tggatgagaa tttggttcct gtagcagcag ccgaaggag acctcgctta aaccaacaca
1320
atcacttctt ccatttcgat gggctctcga ttgcgagctg gctgccgagt ttttcggtt
1380
aagtgatgca caccaccaac attcttggca ttacgcaggc cagcaactcc cagctcaatg
1440
caatggctca tcagattcaa gagatgttcc ccaggttcc ataccatctg gtactgcagg
1500
acctccagct gacacgctca gttgaaataa caacagacaa tatttttagaa ggacggattc
1560
aagtaccttt tctacacag cggtcagata gcatcagacc tgcattgaac agtctgtgg
1620
aaaggccaag cagtaccag gaagaggag aaacttctgc tcagaccgag cgtgtgccac
1680
tggacctcag tctcgcctg gaggagacgc tggacttcgg cgaggtggaa gtggagccca
1740
gtgaggtgga agacttcgag gctcgtggga gccgcttctc caagtctgct gatgagagac
1800
agcgcatgct ggntgcagc taaggacgaa ctctccagc aagctcgcaa acgtttctg
1860
aacaaaagt ctgaagatga tgcggcctca gagagcttcc tcccctcgga aggtgcgtcc
1920
tctgaccccg tgaccctgcg tcgaaggatg ctggctgccg ccggaacgg aggcttcaga
1980
agcagcagac ctctagcgc tcccttgctt tctcagctg cctcctgcgc cctgtcccc
2040
actgactgga ggaggcctgt cccaattctg ccgctccatg gaaaagcggg cttgactgca
2100
ttgccgctgt ataaagcatg tggctttata gtgtttggac agctgataaa tttaatcctt
2160
ctttgtaata ctttcaatgt gacatttctc tccccttag aaacactgca aattttaact
2220
gtaggtatga tctcttctgg tgttgactgg actgcttggg gtgggggacg atcaggagga
2280
agtgagncag tcgcctgcct gcagcaggca gcttctactc ctgcctcatg catacgtccc
2340
acaaatgcag gtgtcctgag caccacaccc agtgggaaga gtgtggggga ggcgcacagt
2400
gtgagcccg cccacgctg tggggtaaca tctgttatca aactgctgtc gttgttggg
2460
aagcatgtag actgtgccag agccagaccc acgggctcat gcaccctga gcagcagggc
2520
atcttggaaa aggaactctt ggttcgatac ctggagcaga ggaggggaaa gtccagggct
2580

ataggggtgtg atgaagtcac ccctttctgt ccactacat ctgggactga cttccgagc
 2640
 ctccagtcga aagccggcctt gatttccgtg aactctgggtg ctctgcac tcagtagtgt
 2700
 gccccatggg tccccctccc tctcagcatt tcttgtccc gtctggacct ggggagtgg
 2760
 taggcagcaa gctttgggtt atgggtttca ttcattgggtg aagtaaatta ggcagtgcta
 2820
 aagcctgtgg gtttggctct tgaacaagat gtgggccttg caagatggga gagtaaacct
 2880
 tgaagggtt tattaagaa ataaaaaga acttttgtat cttttatcct gggagcactg
 2940
 cgttttcta gctgtgttat tcttgggtta attcagcaga gaaggtaagg tgtgaaccta
 3000
 cctgccttgg agagggccca ggtcccaa atcttcaa tcttcacatg tttacttta
 3060
 aggatttgaa ccatgaagtc ataggttaca gacctcagtt ttatgcccc ttggattact
 3120
 ttttttttt tttttttta ctcttgaaa gctttgttt gtggtagtcc ttttgggaag
 3180
 aatccagtat tatctacaat tattggcaaa gtttaaatgt atttacata acggaagtt
 3240
 ttagaatgt tgaaaagtaa ttgaaaagg tgataggtaa attttaggc aaagataatt
 3300
 tatttcaata aatctttcaa aagccttacc ttgaaatgct gttagtaa tttctgtatt
 3360
 ttttttttt aatttgttt gctgagagca tagctatttg tttttattgt aaaacaataa
 3420
 taataataaa aagcaaactc taataaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3480
 aa
 3482

<210> 5024

<211> 323

<212> PRT

<213> Homo sapiens

<400> 5024

Met	Arg	Asp	Ser	Ala	Cys	Trp	Xaa	Gln	Arg	Lys	Asp	Glu	Leu	Leu	Gln
1				5					10					15	
Gln	Ala	Arg	Lys	Arg	Phe	Leu	Asn	Lys	Ser	Ser	Glu	Asp	Asp	Ala	Ala
			20					25					30		
Ser	Glu	Ser	Phe	Leu	Pro	Ser	Glu	Gly	Ala	Ser	Ser	Asp	Pro	Val	Thr
		35					40					45			
Leu	Arg	Arg	Arg	Met	Leu	Ala	Ala	Ala	Arg	Asn	Gly	Gly	Phe	Arg	Ser
		50				55					60				
Ser	Arg	Pro	Pro	Ser	Ala	Pro	Leu	Pro	Ser	Ser	Ala	Ala	Ser	Cys	Ala
65					70					75				80	
Leu	Cys	Pro	Thr	Asp	Trp	Arg	Arg	Pro	Val	Pro	Ile	Leu	Pro	Leu	His
			85					90						95	
Gly	Lys	Ala	Gly	Leu	Thr	Ala	Leu	Pro	Leu	Tyr	Lys	Ala	Cys	Gly	Leu
		100						105					110		
Ile	Val	Phe	Gly	Gln	Leu	Ile	Asn	Leu	Ile	Leu	Leu	Cys	Asn	Thr	Phe

```

      115      120      125
Asn Val Thr Phe Leu Phe Pro Leu Glu Thr Leu Gln Ile Leu Thr Val
      130      135      140
Gly Met Ile Ser Ser Gly Val Asp Trp Thr Ala Trp Gly Gly Gly Arg
145      150      155      160
Ser Gly Gly Ser Glu Xaa Val Ala Cys Leu Gln Gln Ala Ala Ser Thr
      165      170      175
Pro Ala Ser Cys Ile Arg Pro Thr Asn Ala Gly Val Leu Ser Thr Thr
      180      185      190
Pro Ser Gly Lys Ser Val Gly Glu Ala His Ser Val Ser Pro Pro Pro
      195      200      205
Arg Arg Gly Val Thr Ser Val Ile Lys Leu Leu Ser Leu Leu Trp Lys
      210      215      220
His Val Asp Cys Ala Arg Ala Arg Pro Thr Gly Ser Cys Thr Pro Glu
225      230      235      240
Gln Gln Gly Ile Leu Glu Lys Glu Leu Leu Val Arg Tyr Leu Glu Gln
      245      250      255
Arg Arg Gly Lys Ser Arg Ala Ile Gly Cys Asp Glu Val Thr Pro Phe
      260      265      270
Cys Pro Thr Thr Ser Gly Thr Asp Phe Pro Ser Leu Gln Ser Lys Ala
      275      280      285
Gly Leu Ile Ser Val Asn Ser Gly Ala Pro Ala Ser His Glu Cys Ala
      290      295      300
Pro Trp Val Pro Ser Pro Leu Ser Ile Ser Leu Ser Arg Leu Asp Leu
305      310      315      320
Gly Ser Gly

```

<210> 5025
 <211> 2596
 <212> DNA
 <213> Homo sapiens

```

<400> 5025
ngttgcatgt actgtatgtg gagcagtgtg cagtgaagcg gaggcagagc ggctccgcga
60
gcttctctcc actttcccat agagaaaccc tgactggccg ctgagggcta gctacacaca
120
cgccctcacg cccggcgagc ccgcgaggtc actatcatat gacaaaggct ttgccgcagt
180
tcatcttctt ccctgtgtac ttccatttg ccttcttga atcctgctgg catcacagaa
240
gctggaagtt gtgatgttcc actgaaatca caatggaaag tctgacttga ctggtcacag
300
taatgaaagg cagtaataga aataaggatc attcagcaga aggagaaggg gttggaaaac
360
gacaaaaacg aaagtgtgct ttcagtggca tccatttgct agcaaagaaa cttcttgatt
420
tttcagaaga ggaagaagag gaagacgaag aggaggatat tggataaggt tcaacttctt
480
gggggcccga ggcctaagag caagagtgtg gtgaaactga agatggatga atcaccagag
540
cagcgagccc ggagaccaat gaatgcattt cttttatttt gcaaacgcca tcgctctctt
600

```


gtacgtcagg aacaccccag gcttgataac cgagggtgcta ccaagatact agctgattgg
660
tgggccgttc ttgatccaaa ggaaaagcag aaatacacag acatggccaa ggagtataag
720
gatgcattta tgaaagcaaa tcctgggtac aaatgggtgc ctaccacaaa caagcctgtg
780
aaatccccac acccactgtc aatccacgaa agaaactttg ggccttccca tctgactctt
840
caagagactt gccaaagcccc aagaaagcaa agactgaaga aatgcctcag cttaactttg
900
gaatggctga tcctactcaa atgggaggcc tgagtatgct gctgttagct ggagaacatg
960
ctcttggcac accagaggta tcctctggca catgcaggcc tgatgtttca gaatctctg
1020
aattacgtca gaagtcacca ttgtttcagt ttgccgagat atcttcaagt acgtcccact
1080
ctgatgcttc taaaaagcag tgtcaaacat ctgccttggt tcagtttgca gagatttctt
1140
caaacacttc gcagttgggt ggtgctgagc ctgtaaaacg ctgtggaaag tctgcactct
1200
ttcaactggc agagatgtgc ctggcatcag aagggatgaa aatggaagaa tcaaagctaa
1260
taaaagcaaa agaatccgat ggtggaagaa ttaaagaatt agagaaggga aaggaagaaa
1320
aagaatttaa aatggagaaa acagatgaaa ctaggttaca gaaggaagca gaatttgaaa
1380
aatcggttaa ggaaaattta agagattcta aggaattgag aaattttgag gcattgcaaa
1440
tagatgacat aatggctata aaaatggaag atcccaaaga aattagaaag gaagagttag
1500
aagaagatca caaatgtagt cattttcctg atttttctta ttctgccagt agcaagataa
1560
taattagtga tgttcccagt agaaaggatc atatgtgcca tcctcatgga attatgatca
1620
ttgagatcc cgcagcatta aacaagccag aaaagctaaa aaagaaaaag aagaaaagca
1680
aaatggatcg acatggaaat gataaatcca cacccaagaa gacttgcaaa aagaggcagt
1740
cttcggaatc tgacattgag agcgtcatat ataccattga agccgtcgca aaaggagact
1800
ggggcataga gaaacttgga gataccctc gcaagaaggt ccgcacatcc tcaagtggca
1860
aggaagcat tttggatgcc aagccaccaa agaaaaaagt gaaatcaaga gagaagaaaa
1920
tgtcaaagga gaaatcctca gacaccacca aagagtcaag acctccagat ttcattagta
1980
tttctgctag caagaacatt tctggtgaga caccagaggg tataaaagca gaaccattga
2040
cccctatgga agatgcacta ccaccagcc tatcaggaca ggccaagcct gaggacagt
2100
actgtcacag aaaaatagaa acttgtggtt ccaggaaatc cgagaggtct tgcaaaggtg
2160
ctctttataa aaccctggtg tctgagggca tgctcacctc tctgcgagct aatgttgaca
2220

gagggaaaacg aagctcagga aaaggaaact cctctgatca tgaaggggtg tggaatgaag
 2280
 aaagctggac atttagtcag agtgggacca gtgggagcaa gaagttcaag aagacaaagc
 2340
 caaaagaaga ctgtctcctt ggctccgcaa agctggatga agaatttgaa aaaaaattca
 2400
 acagcctccc tcaatatagt cctgttacat ttgaccggaa atgtgtacct gtcccaagaa
 2460
 aaaagaagaa gactggaaat gtgtcctcag aaccgactaa aaccagcaaa ggtcctttcc
 2520
 agtctcagaa aaagaactta ttccacaaaa ttgtcagcaa atataagcac aaaaaggaga
 2580
 agcccaatgt tccgga
 2596

<210> 5026
 <211> 136
 <212> PRT
 <213> Homo sapiens

<400> 5026
 Met Asp Glu Ser Pro Glu Gln Arg Ala Arg Arg Pro Met Asn Ala Phe
 1 5 10 15
 Leu Leu Phe Cys Lys Arg His Arg Ser Leu Val Arg Gln Glu His Pro
 20 25 30
 Arg Leu Asp Asn Arg Gly Ala Thr Lys Ile Leu Ala Asp Trp Trp Ala
 35 40 45
 Val Leu Asp Pro Lys Glu Lys Gln Lys Tyr Thr Asp Met Ala Lys Glu
 50 55 60
 Tyr Lys Asp Ala Phe Met Lys Ala Asn Pro Gly Tyr Lys Trp Cys Pro
 65 70 75 80
 Thr Thr Asn Lys Pro Val Lys Ser Pro His Pro Leu Ser Ile His Glu
 85 90 95
 Arg Asn Phe Gly Pro Ser His Leu Thr Leu Gln Glu Thr Cys Gln Ala
 100 105 110
 Pro Arg Lys Gln Arg Leu Lys Lys Cys Leu Ser Leu Thr Leu Glu Trp
 115 120 125
 Leu Ile Leu Leu Lys Trp Glu Ala
 130 135

<210> 5027
 <211> 359
 <212> DNA
 <213> Homo sapiens

<400> 5027
 ngcggaggcg gggcaggcgc cctgggcgca aggcacggag gcaagggcca gggccagcag
 60
 cagcgggagc agcggggaca tgggtggcagt gcgggcaaga cgcacaagtt ctctgccggc
 120
 acctaccgc gcctggagga gtaccgccgg ggcattcttag gagactggtc caacgctatc
 180
 tccgcgtct actgcaggcg cagctgatgc attgctggtc tctcatctgc agcttcaca
 240

gagtgccaag cccctcactc agcccatccc tgggctctgc tccggggccc caagacccag
 300
 gaggaggagc gttctgectg cccctcccca cctcccctgc aatacagcct ttgtgcggn
 359

<210> 5028
 <211> 68
 <212> PRT
 <213> Homo sapiens

<400> 5028
 Xaa Gly Gly Gly Ala Gly Ala Leu Gly Ala Arg His Gly Gly Lys Gly
 1 5 10 15
 Gln Gly Gln Gln Gln Arg Ala Gln Arg Gly His Gly Gly Ser Ala Gly
 20 25 30
 Lys Thr His Lys Phe Ser Ala Gly Thr Tyr Pro Arg Leu Glu Glu Tyr
 35 40 45
 Arg Arg Gly Ile Leu Gly Asp Trp Ser Asn Ala Ile Ser Ala Leu Tyr
 50 55 60
 Cys Arg Cys Ser
 65

<210> 5029
 <211> 1440
 <212> DNA
 <213> Homo sapiens

<400> 5029
 nnacttttta tatcagtacg agctttataa ttcttctttt gttaagttca ttactactaa
 60
 tgggttaaatt gtcctacaat taaatgatgg caagcccttc aaactggctt ttatttttta
 120
 ttcatgtgtg ctgatatttt tggatcattt gtttactcgt tttttgagtt tacctgattt
 180
 tttttttctc tcaggtaata ggaaatgaat gatgatggaa aagtcaatgc tagctctgag
 240
 gggactttta ttttagttgg attttctaata tggccttatc tggaagtagt tctctttgtg
 300
 gttattttga tcttctgctt gatgacactg ataggaaacc tggtcatcat catcctgacg
 360
 tacctggact cccatctcca tactcccttg tatttcttcc tttcaaactc ctcatttctg
 420
 gatctctgct acaccaccag ctctatccct cagttgctgg tcagtctctg ggggtgtggaa
 480
 aagaccattt cttatgctgg ttgcatgggt caactttact tttttctcac actgggaacc
 540
 acagagtgtg tcctactggg ggtgatgtcc tatgaccgtt atgcagctgt gtgtagacct
 600
 ttgcattaca ctgtcctcat gcactctcgt ttctgccact tgttggtgtg ggcttcttgg
 660
 gtaagtgggt ttacaaaccc agcacttcat tcctccttca ccttctgggt acctctgtgt
 720
 ggacaccgcc aaatagatca ctttttctgt gaagttccgg cacttttatg attatcattt
 780

gtcaataccc gtgaaaataa actgaccctc atgatcaciaa gctccatttt tgttctgcta
 840
 cttctcacc ctttttcac ttcctatggg gctattgccc aggcgtgtact gaggatgcag
 900
 tcaaccactg ggcttcagaa agtatttgga acatgtggag ctcacatata ggttgatatc
 960
 ctctttttca ttccggccat gtgcatgtat ctccagccac catcagggaa ttctcaagat
 1020
 caaggcaagt tcattgctct cttttataact gttgttacac ctagtcttaa ccctctaate
 1080
 tacaccctca gaaacaaaga tgtaagaggg gtagtgaaga gactaagggg gtgggagtg
 1140
 gcctgtgttt gtgtgatatt aacaatataa tggagtcttt cctcacaatg attcatccat
 1200
 ctgttcattt atcaaccatt cttttattca ctactctgt tagcacttgc tgagcatgta
 1260
 ctctaacaaa gtcgtggaga tcctggtaac aggtaggaat aaaacacatt cagcttaaat
 1320
 accattcact tttggagaaa acagctgtgt aaaatcaaga taaaacatct atagtgtgt
 1380
 ttttccatgg cacaaccta atgaatacaa gaaagacttt tcctgattaa aaataaggca
 1440

<210> 5030

<211> 188

<212> PRT

<213> Homo sapiens

<400> 5030

Met Asn Asp Asp Gly Lys Val Asn Ala Ser Ser Glu Gly Tyr Phe Ile
 1 5 10 15
 Leu Val Gly Phe Ser Asn Trp Pro Tyr Leu Glu Val Val Leu Phe Val
 20 25 30
 Val Ile Leu Ile Phe Cys Leu Met Thr Leu Ile Gly Asn Leu Phe Ile
 35 40 45
 Ile Ile Leu Thr Tyr Leu Asp Ser His Leu His Thr Pro Leu Tyr Phe
 50 55 60
 Phe Leu Ser Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Ser Ser
 65 70 75 80
 Ile Pro Gln Leu Leu Val Ser Leu Trp Gly Val Glu Lys Thr Ile Ser
 85 90 95
 Tyr Ala Gly Cys Met Val Gln Leu Tyr Phe Phe Leu Thr Leu Gly Thr
 100 105 110
 Thr Glu Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Ala
 115 120 125
 Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Ser Arg Phe Cys
 130 135 140
 His Leu Leu Ala Val Ala Ser Trp Val Ser Gly Phe Thr Asn Pro Ala
 145 150 155 160
 Leu His Ser Ser Phe Thr Phe Trp Val Pro Leu Cys Gly His Arg Gln
 165 170 175
 Ile Asp His Phe Phe Cys Glu Val Pro Ala Leu Leu
 180 185

<210> 5031
 <211> 505
 <212> DNA
 <213> Homo sapiens

<400> 5031
 tggcgcgcct tgacgagtga gccggggagc catggacaac tgtttggcgg ccgcagcgcgt
 60
 gaatggggtg gaccgacggt ccctgcagcg ttcagcaagg ctggctctag aagtgtctgga
 120
 gagggccaag aggagggcgg tggactggca tgccttgag cgtcccaaag gctgcatggg
 180
 ggtccttgcc cgggaggcgc cccacctaga gaaacagccg gcagccggcc cgcagcgcgt
 240
 tctcccgga gagagagaag agagaccccc aacccttagt gcttccttca gaacaatggc
 300
 tgaattcatg gactatactt caagtcagtg tgggaaatat tattcatctg tgccagagga
 360
 aggaggggca acccatgtct atcgttatca cagaggcgag tcgaagctgc acatgtgctt
 420
 ggacataggg aatggtcaga gaaaagacag aaaaagaca tcccttggtc ctggaggcag
 480
 ctatcaaata tcagagcatg ctcca
 505

<210> 5032
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 5032
 Met Asp Asn Cys Leu Ala Ala Ala Leu Asn Gly Val Asp Arg Arg
 1 5 10 15
 Ser Leu Gln Arg Ser Ala Arg Leu Ala Leu Glu Val Leu Glu Arg Ala
 20 25 30
 Lys Arg Arg Ala Val Asp Trp His Ala Leu Glu Arg Pro Lys Gly Cys
 35 40 45
 Met Gly Val Leu Ala Arg Glu Ala Pro His Leu Glu Lys Gln Pro Ala
 50 55 60
 Ala Gly Pro Gln Arg Val Leu Pro Gly Glu Arg Glu Glu Arg Pro Pro
 65 70 75 80
 Thr Leu Ser Ala Ser Phe Arg Thr Met Ala Glu Phe Met Asp Tyr Thr
 85 90 95
 Ser Ser Gln Cys Gly Lys Tyr Tyr Ser Ser Val Pro Glu Glu Gly Gly
 100 105 110
 Ala Thr His Val Tyr Arg Tyr His Arg Gly Glu Ser Lys Leu His Met
 115 120 125
 Cys Leu Asp Ile Gly Asn Gly Gln Arg Lys Asp Arg Lys Lys Thr Ser
 130 135 140
 Leu Gly Pro Gly Gly Ser Tyr Gln Ile Ser Glu His Ala Pro
 145 150 155

<210> 5033
 <211> 2888

<212> DNA

<213> Homo sapiens

<400> 5033

nnggatgagg acaaggagga cgacttccgg gctccgctgt acaagaacgt ggatgtgcga
60
ggatatccagg tccgcatgaa gtggtgtgcc acgtgccact tctaccgccc gccgcgctgc
120
tcccactgca gcgtctgtga caactgtgta gaggtgactg ggaagttccg cgggggtgtg
180
aaccctttca cccgaggctg ctgtgggaat gtggagcacg tgctgtgtag cccctggcg
240
ccccggtagc tggaggagcc acccggctg ccgctcggg tgagtttgaa gccgccttc
300
cttaggcctg aactcctgga ccgagctgca ccgctcaagg tcaagcttag tgacaacggg
360
ctgaaggctg gcctgggccc tagcaagtcc aagggcagcc tggaccgct ggatgagaag
420
ccactggact tggggccacc actgcccccc aagatagagg ctggcacgtt cagcagtga
480
ctgcagaccc cgcgccagg cagtgtgag agtgccctgt cgggtgcagag gaccagcccc
540
ccgacacctg ccatgtacaa gttaggccc gctttcccga cgggtccaa ggtgcccttc
600
tgtggaccag gcgagcaggt tccaggccct gattccctga ccctggggga cgacaacatc
660
cgtagcctgg actttgtgtc cgagccgagc ctggacctcc ctgactatgg gccagggg
720
ctgcatgcag cctaccgcc atccccaccg ctcagcgcct ctgatgcctt ctcgggctg
780
ttgcgctccc tgagcctcaa ggctcagc cggcggggcg gggatcatgt ggccctgcag
840
ccctgctgct ctgagggggg gccccccacg cccaccgta gcatttttgc ccccatgca
900
ctgcccacc gcaacggcag cctgtcctat gacagcctgc tcaatcctgg ctgcctggt
960
ggccacgct gccctgcca cccagcagtt ggctgggccc gataccactc accctacctg
1020
catcctgggg caacgggga cccgccagg cccctacccc gcagcttcag cccgtgctg
1080
ggcccccgcc cccgggagcc ctgcctgtg cgctacgaca acctgtccag gaccatcatg
1140
gcatccatcc aggagcgcaa ggacagggag gagcgtgagc gcctgctgcg ctcccaggcc
1200
gactcactct tcggcgactc aggcgtctat gacgctccca gctcctacag cctgcagcag
1260
gccagtgtgc tgtccgaggg cccccgaggt cccgcgctgc gctatggctc cagagacgac
1320
cttgtggctg ggcccggtt cgggtgggcc cgcaacctg ccctgcagac gtcactgtcc
1380
tcgctgtcca gctccgtgag ccgtgcaccg cggacgtcgt cctcctccct gcaggctgat
1440
caggccagca gcaacgcccc cggggccccg gccagcagt ggctcacaca ggtcacctgc
1500

acgccagggc ctgccctccc cgcccggcac tccccactca ccatactacg cgggccccaa
1560
agctgtcgcc ttcattccaca cggacctccc agagccaccg ccctcgctga ccgtgcagag
1620
ggaccaccct cagctgaaga ctcccccaag taagcttaat gggcagtcct cgggcctggc
1680
ccggctggga cctgccaccg gccccccagg gccctctgcc agccctacac ggcacacgct
1740
ggttaagaag gtgtccggcg tgggtgggac cacctacgag atctcgggtg gaggactgac
1800
tgccacacat ccgccatggt gccacgggga ccaggacccc gcagcgcacc cccctcccc
1860
accaacttct ctgccccagg gacccgaggc caccacagcc tgggtgtggac ccatacggcg
1920
gagagagtgc cagcctcca cagcttgccc caagcgctct gcctgcccg ccaactcatct
1980
gcccatgggg aagtcggctc actgggacaa gggccactgg gctgggtctgt gtctgggcct
2040
gtcccatggc tggggcagtg agggggccca gtcagcctct ttggggcacc ctctctcagc
2100
caggcttggc ccaactgcat caccacgac cccagatcac cgccaggcca gcccccaatg
2160
gtccccttac ggacaggtcc cagagatgga cagaggcacc caggggcccc accgtccttc
2220
tgacacagcc tgtgggctcc cggaccgagt gtcccccgcc aggctactcc taactaacgc
2280
gttgcccttc acggaccccc ctggaagctt gtagcttggc aagggtgatg cttctgcct
2340
ggcctgctct ggggtgggtg ggataggtgg acagacggcc agccagccag ctgtggccgg
2400
ggggccggct ccatgtgtcc cgtgtctgtg tgctgtgctg ccgcgcctg tctgatgtgt
2460
cagtgtccg gccgcgctg tccctttcat caaagcctta acctttgctt tatgctcttg
2520
tgaggaggca cgggggggca ggcgggagca ggcacggggg tgatgctgcc acagggggct
2580
ggtgacacc agagccccct cccagccct caggccctcc ctgccaaact ggagaacccc
2640
acccaaggc atgccacgtc cgcagccccg gcctggctgc ggtgctcgcg ccgtgggaaa
2700
gcacactggg gaggggtcag tgcttccctt ggtgtcaggg acctgagagt aagcacatga
2760
cagcgtctgc ttgcgttgtg tctgttttat gtttttatat ctacatctat atatctataa
2820
ttttattaaa aaaaagaaaa agaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2880
aaaaaaaa
2888

<210> 5034

<211> 550

<212> PRT

<213> Homo sapiens

<400> 5034

Xaa Asp Glu Asp Lys Glu Asp Asp Phe Arg Ala Pro Leu Tyr Lys Asn
 1 5 10 15
 Val Asp Val Arg Gly Ile Gln Val Arg Met Lys Trp Cys Ala Thr Cys
 20 25 30
 His Phe Tyr Arg Pro Pro Arg Cys Ser His Cys Ser Val Cys Asp Asn
 35 40 45
 Cys Val Glu Val Thr Gly Lys Phe Arg Gly Gly Val Asn Pro Phe Thr
 50 55 60
 Arg Gly Cys Cys Gly Asn Val Glu His Val Leu Cys Ser Pro Leu Ala
 65 70 75 80
 Pro Arg Tyr Val Val Glu Pro Pro Arg Leu Pro Leu Ala Val Ser Leu
 85 90 95
 Lys Pro Pro Phe Leu Arg Pro Glu Leu Leu Asp Arg Ala Ala Pro Leu
 100 105 110
 Lys Val Lys Leu Ser Asp Asn Gly Leu Lys Ala Gly Leu Gly Arg Ser
 115 120 125
 Lys Ser Lys Gly Ser Leu Asp Arg Leu Asp Glu Lys Pro Leu Asp Leu
 130 135 140
 Gly Pro Pro Leu Pro Pro Lys Ile Glu Ala Gly Thr Phe Ser Ser Asp
 145 150 155 160
 Leu Gln Thr Pro Arg Pro Gly Ser Ala Glu Ser Ala Leu Ser Val Gln
 165 170 175
 Arg Thr Ser Pro Pro Thr Pro Ala Met Tyr Lys Phe Arg Pro Ala Phe
 180 185 190
 Pro Thr Gly Pro Lys Val Pro Phe Cys Gly Pro Gly Glu Gln Val Pro
 195 200 205
 Gly Pro Asp Ser Leu Thr Leu Gly Asp Asp Asn Ile Arg Ser Leu Asp
 210 215 220
 Phe Val Ser Glu Pro Ser Leu Asp Leu Pro Asp Tyr Gly Pro Gly Gly
 225 230 235 240
 Leu His Ala Ala Tyr Pro Pro Ser Pro Pro Leu Ser Ala Ser Asp Ala
 245 250 255
 Phe Ser Gly Ala Leu Arg Ser Leu Ser Leu Lys Ala Ser Ser Arg Arg
 260 265 270
 Gly Gly Asp His Val Ala Leu Gln Pro Leu Arg Ser Glu Gly Gly Pro
 275 280 285
 Pro Thr Pro His Arg Ser Ile Phe Ala Pro His Ala Leu Pro Asn Arg
 290 295 300
 Asn Gly Ser Leu Ser Tyr Asp Ser Leu Leu Asn Pro Gly Ser Pro Gly
 305 310 315 320
 Gly His Ala Cys Pro Ala His Pro Ala Val Gly Val Ala Gly Tyr His
 325 330 335
 Ser Pro Tyr Leu His Pro Gly Ala Thr Gly Asp Pro Pro Arg Pro Leu
 340 345 350
 Pro Arg Ser Phe Ser Pro Val Leu Gly Pro Arg Pro Arg Glu Pro Ser
 355 360 365
 Pro Val Arg Tyr Asp Asn Leu Ser Arg Thr Ile Met Ala Ser Ile Gln
 370 375 380
 Glu Arg Lys Asp Arg Glu Glu Arg Glu Arg Leu Leu Arg Ser Gln Ala
 385 390 395 400
 Asp Ser Leu Phe Gly Asp Ser Gly Val Tyr Asp Ala Pro Ser Ser Tyr
 405 410 415
 Ser Leu Gln Gln Ala Ser Val Leu Ser Glu Gly Pro Arg Gly Pro Ala

420 425 430
 Leu Arg Tyr Gly Ser Arg Asp Asp Leu Val Ala Gly Pro Gly Phe Gly
 435 440 445
 Gly Ala Arg Asn Pro Ala Leu Gln Thr Ser Leu Ser Ser Leu Ser Ser
 450 455 460
 Ser Val Ser Arg Ala Pro Arg Thr Ser Ser Ser Ser Leu Gln Ala Asp
 465 470 475 480
 Gln Ala Ser Ser Asn Ala Pro Gly Ala Pro Ala Gln Gln Trp Leu Thr
 485 490 495
 Gln Val Thr Cys Thr Pro Gly Pro Ala Leu Pro Ala Arg His Ser Pro
 500 505 510
 Leu Thr Ile Leu Arg Gly Pro Gln Ser Cys Arg Leu His Pro His Gly
 515 520 525
 Pro Pro Arg Ala Thr Ala Leu Ala Asp Arg Ala Glu Gly Pro Pro Ser
 530 535 540
 Ala Glu Asp Ser Pro Lys
 545 550

<210> 5035

<211> 2002

<212> DNA

<213> Homo sapiens

<400> 5035

cggccgtgcg ggcacgccat ggacttcaac atgaagaagc tggcgctcgga cgcgggcatc
 60
 ttcttcaccc gggcgggtgca gttcacggag gagaaatttg gccaggctga gaagactgag
 120
 cttgatgccc actttgaaaa ccttctggcc cgggcagaca gcaccaagaa ctggacagag
 180
 aagatcttga ggcagacaga ggtgctgctg cagcccaacc ccagtgcctg agtggaggag
 240
 ttcctgtatg agaagctgga caggaaggtc ccctcaaggg tcaccaacgg ggagctgctg
 300
 gctcagtaca tggcagacgc ggccagttag ctggggccga ccaccccta tgggaagaca
 360
 ctgatcaagg tggcagaagc tgaaaagcaa ctgggagccg cggagaggga ttttatccac
 420
 acggcctcca tcagcttctc cacacccttg cgcaacttcc tggaggggga ctggaagacc
 480
 atctcgaagg agagtcggct cctccaaaac cggcgctctg acttgatgc ctgcaaagcg
 540
 aggctgaaga aggccaaggc tgcagaagcc aaagccacgc tctggaatga tgaagtggac
 600
 aaggccgagc aggagctccg cgtggcccag acagagtttg accggcaagc agaagtgacc
 660
 cgtctcttgc tggagggaat cagtagcact cacgtgaacc acctgcgctg cctccacgag
 720
 ttcgtcaagt ctacagacaac ctactacgca cagtgtacc gccacatgct ggacttgcag
 780
 aagcagctgg gcagctccca gggtgccata tcccgccacc ttcgtgggca ccacagagcc
 840
 cgctcccccac cctgagcag cacctcacc accactgctg cggccactat gcctgtggtg
 900

ccctctgtgg ccagcctggc ccctccgggg gaggcctcgc tctgcctgga agaggtggcc
 960
 ccccttgcca gtgggacccg caaagctcgg gtgctctatg actacgaggc agccgacagc
 1020
 agtgagctgg ccctgctggc tgatgagctc atcactgtct acagcctgcc tggcatggac
 1080
 cctgactggc tcattggcga gagaggcaac aagaagggca aggtccctgt cacctacttg
 1140
 gaactgctca gctaggcagg tgcccccatc cccccgcac tctggcctag gcaggagagg
 1200
 atgggcgcag ccctgccact taacttgttt gttggtgaca cagttgttca gagtggggag
 1260
 aattcacccc attctgtccc tgcccctagt cacctagctg tgagggtgcc tgaggctgaa
 1320
 tggctccacc cctccccag ccctgcttct gacctgtggc tctggagccc ctgcccctgc
 1380
 ctgcatcccc gagcacccca ccctccaggc tccactaagg agggaggggc tgtctgcagc
 1440
 agctgcactc agcacctagg ccagggtggg gccgcccag atgggctcag gaagccccag
 1500
 gtgcactcag cgagagccct gcctttcagt tgccaaaagc tgcacaggg gaatgcggca
 1560
 aggcacacag ggctctggca gcccctgggg actgggcgct gcccctggga ggggagagcc
 1620
 tggccagggc tgggtgtggg cccggagcag catcttccgg tgctatcctc ccctcccacc
 1680
 cctcacagct caagccaagt ccagcggccg cagtcttcac ctctccacac tcacttttta
 1740
 tctggtgttt ttacttctgc ctgcgtttgc tctctagcca ataaaccgtc cttgtgtgcg
 1800
 agcgcaaagc tcgggtgctc tatgactacg aggcagccga cagcagttag ctggccctgc
 1860
 tggctgatga gctcatcact gtctacagcc tgccctggcat ggaccctgac tggctcattg
 1920
 gcgagagagg caacaagaag ggcaaggctc ctgtcaccta cttggaactg ctcagctagg
 1980
 caggtgcccc catccccccc gc
 2002

<210> 5036

<211> 384

<212> PRT

<213> Homo sapiens

<400> 5036

Arg	Pro	Cys	Gly	His	Ala	Met	Asp	Phe	Asn	Met	Lys	Lys	Leu	Ala	Ser
1				5					10					15	
Asp	Ala	Gly	Ile	Phe	Phe	Thr	Arg	Ala	Val	Gln	Phe	Thr	Glu	Glu	Lys
			20					25					30		
Phe	Gly	Gln	Ala	Glu	Lys	Thr	Glu	Leu	Asp	Ala	His	Phe	Glu	Asn	Leu
		35				40						45			
Leu	Ala	Arg	Ala	Asp	Ser	Thr	Lys	Asn	Trp	Thr	Glu	Lys	Ile	Leu	Arg
	50					55					60				
Gln	Thr	Glu	Val	Leu	Leu	Gln	Pro	Asn	Pro	Ser	Ala	Arg	Val	Glu	Glu

```

65          70          75          80
Phe Leu Tyr Glu Lys Leu Asp Arg Lys Val Pro Ser Arg Val Thr Asn
          85          90          95
Gly Glu Leu Leu Ala Gln Tyr Met Ala Asp Ala Ala Ser Glu Leu Gly
          100          105          110
Pro Thr Thr Pro Tyr Gly Lys Thr Leu Ile Lys Val Ala Glu Ala Glu
          115          120          125
Lys Gln Leu Gly Ala Ala Glu Arg Asp Phe Ile His Thr Ala Ser Ile
          130          135          140
Ser Phe Leu Thr Pro Leu Arg Asn Phe Leu Glu Gly Asp Trp Lys Thr
145          150          155          160
Ile Ser Lys Glu Ser Arg Leu Leu Gln Asn Arg Arg Leu Asp Leu Asp
          165          170          175
Ala Cys Lys Ala Arg Leu Lys Lys Ala Lys Ala Ala Glu Ala Lys Ala
          180          185          190
Thr Leu Trp Asn Asp Glu Val Asp Lys Ala Glu Gln Glu Leu Arg Val
          195          200          205
Ala Gln Thr Glu Phe Asp Arg Gln Ala Glu Val Thr Arg Leu Leu Leu
          210          215          220
Glu Gly Ile Ser Ser Thr His Val Asn His Leu Arg Cys Leu His Glu
225          230          235          240
Phe Val Lys Ser Gln Thr Thr Tyr Tyr Ala Gln Cys Tyr Arg His Met
          245          250          255
Leu Asp Leu Gln Lys Gln Leu Gly Ser Ser Gln Gly Ala Ile Ser Arg
          260          265          270
His Leu Arg Gly His His Arg Ala Arg Leu Pro Pro Leu Ser Ser Thr
          275          280          285
Ser Pro Thr Thr Ala Ala Ala Thr Met Pro Val Val Pro Ser Val Ala
          290          295          300
Ser Leu Ala Pro Pro Gly Glu Ala Ser Leu Cys Leu Glu Glu Val Ala
305          310          315          320
Pro Pro Ala Ser Gly Thr Arg Lys Ala Arg Val Leu Tyr Asp Tyr Glu
          325          330          335
Ala Ala Asp Ser Ser Glu Leu Ala Leu Leu Ala Asp Glu Leu Ile Thr
          340          345          350
Val Tyr Ser Leu Pro Gly Met Asp Pro Asp Trp Leu Ile Gly Glu Arg
          355          360          365
Gly Asn Lys Lys Gly Lys Val Pro Val Thr Tyr Leu Glu Leu Leu Ser
          370          375          380

```

<210> 5037

<211> 2102

<212> DNA

<213> Homo sapiens

<400> 5037

```

gcactgcagc ctgggcgaca gagcaaaact ccgtctcaac aacaacgaca acaaaaattc
60
agtcttcagg ttttcttttag aaaacttgaa gatctggcca cagctggcat cctggcagcg
120
gtttgctgga gttgagggtc agccgtccct ctgcagggtg ggtcaccctc ctgttaacca
180
cgccctgccc cgccccgctt cctccctctc gtgcgtcatc aagcatttgc tgttgttttc
240

```

ctcatagtag tgataagaga aaagtgaat atctttgtct cctgtctct gtcaaaagtg
300
ggaaaacgca agatagacca ggagggccgt gtgtttcaag aaaagtggga gagagcgtat
360
ttcttcgtgg aagtacagaa tattccaaca tgtctcatat gcaaacaag catgtctgtg
420
tccaaagaat ataacctaag acgccactat caaaccaatc acagcaagca ttatgaccag
480
tatacggaaa gaatgcgtga cgagaagctt cacgagctga aaaaagggt caggaagtat
540
ctcttaggct catcagacac cgagtgtccc gagcaaaaac aagtgtttgc aaaccaagt
600
ccaaccaga aatccccctg gcagcctgta gaggacctag ctgggaactt atgggagaag
660
ttacgtgaaa aaatcaggtc ttttgtggca tattctatcg caatcgatga gatcacggat
720
ataaataata ccaccagtt ggccatattc atccgtgggtg tcgatgagaa tttcgatgtg
780
tccgaagaac ttctggacac ggtgcccatg acgggtacaa aatctggcaa cgagatcttt
840
tcgctgtgtg agaagagcct gaaaaagttc tgtatcgact ggtcgaaatt agtaagcgtg
900
gcctccactg gcaccccagc gatgggtgat gccataacg ggcttgtcac aaaactgaag
960
tccaggggtg cgacgttctg caaggggtgcg gaactgaagt ccatctgttg tataattcat
1020
ccggaatcac tctgtgctca gaagttgaag atggaccacg tcatggacgt ggtagtgaag
1080
tccgtgaact ggatatgctc ccggggactg aaccacagcg agttcacaac cttgctctat
1140
gagctggaca gccagtatgg tagcctctg tactacacgg agattaagtg gctcagtcgc
1200
gggctcgtgc taaagagatt tttcgaatcc ttggaagaaa tcgactcctt catgtcatcc
1260
agagggaac ccctgcctca actgagctcc atagattgga tccgagacct ggccttcttg
1320
gttgacatga cgatgcatct gaacgctttg aacatctctc tccaaggaca ctcccaaact
1380
gtcacgcaga tgtatgacct gatccgggcg ttcctagcaa aactgtgcct ctgggagact
1440
catttgacga ggaataatct ggcccacttt ccacacctga aattggcttc cagaaatgaa
1500
agcgatggcc tgaactacat tcccaaaatc gcggaactca agaccgaatt ccagaaaagg
1560
ctgtctgatt tcaaactcta cgaaagcgaa ctgactctgt tcagctcccc gttctccacg
1620
aagatcgaca gtgtgcacga ggagctccag atggagggtta tcgacctgca atgcaacag
1680
gtcctgaaga cgaaatacga caaggtggga ataccagaat tctacaagta cctctggggg
1740
agctaccga aatacaagca ccattgcgca aagattcttt ccatgttcgg gagcacctac
1800
atctgcgaac agctgttctc cattatgaaa ctgagcaaaa caaaatactg ctcccagtta
1860

aaggattccc agtgggattc tgtactccac atcgcaacgt gatggagaga aaactcctgg
 1920
 cagggcccta tgggtgggaaa ggctggagtc ttctagtccc aagggtattgg gagatgacaa
 1980
 aatgaattttt tttttctttt ttgagatgga gtcttgctct gtcgcccagg ttggagtgca
 2040
 gtggcgtgat ctcggcttac tgcaacttcc agtcctctggg ttcgaacgat tctcctgcct
 2100
 ca
 2102

<210> 5038

<211> 533

<212> PRT

<213> Homo sapiens

<400> 5038

Gly	Lys	Arg	Lys	Ile	Asp	Gln	Glu	Gly	Arg	Val	Phe	Gln	Glu	Lys	Trp
1			5					10						15	
Glu	Arg	Ala	Tyr	Phe	Phe	Val	Glu	Val	Gln	Asn	Ile	Pro	Thr	Cys	Leu
		20					25						30		
Ile	Cys	Lys	Gln	Ser	Met	Ser	Val	Ser	Lys	Glu	Tyr	Asn	Leu	Arg	Arg
	35					40						45			
His	Tyr	Gln	Thr	Asn	His	Ser	Lys	His	Tyr	Asp	Gln	Tyr	Thr	Glu	Arg
	50				55					60					
Met	Arg	Asp	Glu	Lys	Leu	His	Glu	Leu	Lys	Lys	Gly	Leu	Arg	Lys	Tyr
65					70					75				80	
Leu	Leu	Gly	Ser	Ser	Asp	Thr	Glu	Cys	Pro	Glu	Gln	Lys	Gln	Val	Phe
			85					90					95		
Ala	Asn	Pro	Ser	Pro	Thr	Gln	Lys	Ser	Pro	Val	Gln	Pro	Val	Glu	Asp
		100					105						110		
Leu	Ala	Gly	Asn	Leu	Trp	Glu	Lys	Leu	Arg	Glu	Lys	Ile	Arg	Ser	Phe
	115					120						125			
Val	Ala	Tyr	Ser	Ile	Ala	Ile	Asp	Glu	Ile	Thr	Asp	Ile	Asn	Asn	Thr
	130					135					140				
Thr	Gln	Leu	Ala	Ile	Phe	Ile	Arg	Gly	Val	Asp	Glu	Asn	Phe	Asp	Val
145				150						155				160	
Ser	Glu	Glu	Leu	Leu	Asp	Thr	Val	Pro	Met	Thr	Gly	Thr	Lys	Ser	Gly
			165					170					175		
Asn	Glu	Ile	Phe	Ser	Arg	Val	Glu	Lys	Ser	Leu	Lys	Lys	Phe	Cys	Ile
		180					185						190		
Asp	Trp	Ser	Lys	Leu	Val	Ser	Val	Ala	Ser	Thr	Gly	Thr	Pro	Ala	Met
	195					200						205			
Val	Asp	Ala	Asn	Asn	Gly	Leu	Val	Thr	Lys	Leu	Lys	Ser	Arg	Val	Ala
	210				215						220				
Thr	Phe	Cys	Lys	Gly	Ala	Glu	Leu	Lys	Ser	Ile	Cys	Cys	Ile	Ile	His
225				230						235				240	
Pro	Glu	Ser	Leu	Cys	Ala	Gln	Lys	Leu	Lys	Met	Asp	His	Val	Met	Asp
			245					250					255		
Val	Val	Val	Lys	Ser	Val	Asn	Trp	Ile	Cys	Ser	Arg	Gly	Leu	Asn	His
		260					265						270		
Ser	Glu	Phe	Thr	Thr	Leu	Leu	Tyr	Glu	Leu	Asp	Ser	Gln	Tyr	Gly	Ser
	275					280						285			
Leu	Leu	Tyr	Tyr	Thr	Glu	Ile	Lys	Trp	Leu	Ser	Arg	Gly	Leu	Val	Leu

290 295 300
 Lys Arg Phe Phe Glu Ser Leu Glu Glu Ile Asp Ser Phe Met Ser Ser
 305 310 315 320
 Arg Gly Lys Pro Leu Pro Gln Leu Ser Ser Ile Asp Trp Ile Arg Asp
 325 330 335
 Leu Ala Phe Leu Val Asp Met Thr Met His Leu Asn Ala Leu Asn Ile
 340 345 350
 Ser Leu Gln Gly His Ser Gln Ile Val Thr Gln Met Tyr Asp Leu Ile
 355 360 365
 Arg Ala Phe Leu Ala Lys Leu Cys Leu Trp Glu Thr His Leu Thr Arg
 370 375 380
 Asn Asn Leu Ala His Phe Pro Thr Leu Lys Leu Ala Ser Arg Asn Glu
 385 390 395 400
 Ser Asp Gly Leu Asn Tyr Ile Pro Lys Ile Ala Glu Leu Lys Thr Glu
 405 410 415
 Phe Gln Lys Arg Leu Ser Asp Phe Lys Leu Tyr Glu Ser Glu Leu Thr
 420 425 430
 Leu Phe Ser Ser Pro Phe Ser Thr Lys Ile Asp Ser Val His Glu Glu
 435 440 445
 Leu Gln Met Glu Val Ile Asp Leu Gln Cys Asn Thr Val Leu Lys Thr
 450 455 460
 Lys Tyr Asp Lys Val Gly Ile Pro Glu Phe Tyr Lys Tyr Leu Trp Gly
 465 470 475 480
 Ser Tyr Pro Lys Tyr Lys His His Cys Ala Lys Ile Leu Ser Met Phe
 485 490 495
 Gly Ser Thr Tyr Ile Cys Glu Gln Leu Phe Ser Ile Met Lys Leu Ser
 500 505 510
 Lys Thr Lys Tyr Cys Ser Gln Leu Lys Asp Ser Gln Trp Asp Ser Val
 515 520 525
 Leu His Ile Ala Thr
 530

<210> 5039

<211> 3059

<212> DNA

<213> Homo sapiens

<400> 5039

gggccatgca gggcgagac cggctaaacc ctgctgagac cgggctccgt gcgtccaggg
 60
 gcggctaatag ccctcacgct gtctacgctg ctgcaaccgg gccgcatctg gacggggcgc
 120
 cgcgcgcgga gcgacgccgg gccagcaatg ctgcttgagg cctctctggt ggggggtgctg
 180
 ctgttctcca agctggtgct gaaactgccc tggacccagg tgggattctc cctgttgctc
 240
 ctctacttgg gatctggcgg ctggcgcttc atccgggtct tcatcaagac catcaggcgc
 300
 gatatctttg gcggcctggt cctcctgaag gtgaaggcaa aggtgcgaca gtgcctgcag
 360
 gagcgggcga cagtgcccat tttgtttgcc tctaccgttc ggcgccaccc cgacaagacg
 420
 gccctgatct tcgagggcac agataccac tggaccttcc gccagctgga tgagtactca
 480

agcagtgtag ccaacttcct gcaggcccgg ggcttggcct cgggcgatgt ggctgccatc
540
ttcatggaga accgcaatga gtctgtgggc ctatggctgg gcatggccaa gctcgggtgtg
600
gaggcagccc tcatcaacac caacctgcgg cgggatgtct tgctccactg cctcaccacc
660
tcgcgcgcac gggcccttgt ctttggcagc gaaatggcct cagccatctg tgaggtccat
720
gccagcccgg acccctcgct cagcctcttc tgctctggct cctgggagcc cgggtgcggtg
780
cctccaagca cagaacacct ggaccctctg ctgaaagatg ctcccaagca ctttcccagt
840
tgtctgaca agggcttcac agataaactg ttctacatct acacatccgg caccacaggg
900
ctgcccagg cgcctatcgt ggtgcacagc aggtattacc gcatggctgc cctgggtgtac
960
tatggattcc gcatgcggcc caacgacatc gtctatgact gcctccccct ctaccactca
1020
gcaggaaaca tcgtgggaat cggccagtgc ctgctgcatg gcatgacggt ggtgattcgg
1080
aagaagttct cagcctcccg gttctgggac gattgtatca agtacaactg cacgattgtg
1140
cagtacattg gtgaactgtg ccgctacctc ctgaaccagc caccgcggga ggcagaaaac
1200
cagcaccagg ttcgcatggc actaggcaat gcctccggca gtccatctgg accaactttt
1260
ccagccgctt ccacataccc caggtggctg agttctacgg ggccagagtg caactgtagc
1320
ctgggcaact tcgacagcca ggtggggggc tgtggtttca atagccgcat cctgtccttc
1380
gtgtacccca tccggttggt acgtgtcaac gaggacacca tggagctgat ccggggggccc
1440
gacggcgtct gcattccctg ccagccaggt gagccgggccc agctgggtggg ccgcatcatc
1500
cagaaagacc ccctgcgcgg cttcgatggc tacctcaacc agggcgccaa caacaagaag
1560
attgccaagg atgtcttcaa gaagggggac caggcctacc ttactggtga tgtgctggtg
1620
atggacgagc tgggctacct gtacttccga gaccgcactg gggacacgtt ccgctggaaa
1680
ggtgagaacg tgtccaccac cgaggtggaa ggcacactca gccgcctgct ggacatggct
1740
gacgtggccg tgtatggtgt cgaggtgcc a ggaaccgagg gccggggccg aatggctgct
1800
gtggccagcc cactggcaa ctgtgacctg gagcgctttg ctcaggtctt ggagaaggaa
1860
cttccctgt atgcgcgccc catcttctctg cgcctcctgc ctgagctgca caaacagga
1920
acctacaagt tccagaagac agagctacgg aaggaggcct ttgaccggc tattgtgaag
1980
accgctgtt ctatctagat gcagaagggc cgctacgtcc cgctggacca agaggcctac
2040
agccgcatcc aggcaggcaa ggagaagctg tgattcccc catccctctg agggccggcg
2100

gatgctggat ceggagcccc aggttccgcc ccagagcggg cctggacaag gccagaccaa
 2160
 agcaagcagg gcctggcacc tccatcctga ggtgctgccc ctccatccaa aactgccaag
 2220
 tgactcattg ccttcccaac ccttcagag gctttctgtg aaagtctcat gtccaagttc
 2280
 cgtcttctgg gctgggcagg ccctcgggtt ccagggctga gactgacggg ttttctcagg
 2340
 atgatgtctt gggtgagggg agggagagga caaggggtca ccgagccctt ccagagagagc
 2400
 agggagctta taaatggaac cagagcagaa gtccccagac tcaggaagtc aacagagtgg
 2460
 gcagggacag tggtagcatc catctggtgg ccaaagagaa tcgtagcccc agagctgccc
 2520
 aagttcactg ggctccaccc ccacctccag gaggggagga gaggacctga catctgaagg
 2580
 tggccctga tgcccatct acagcaggag gtcaggacca cgccctggc ctctcccccac
 2640
 tcacccatcc tcctccctgg gtggctgect gattatccct caggcagggc ctctcagtcc
 2700
 ttgtgggtct gtgtcacctc catctcagtc ttggcctggc tatgagggga ggaggaatgg
 2760
 gagcgggggc tcaggggcca ataaactctg ccttgagtc tcctagcctg tgtgcaaacc
 2820
 acccaagccc accctgaccc cagaacccca cagccccact gtggccgctt gatccccac
 2880
 gccaaacccc tggccattg acccgctca tctgttcatt cacttatcta agctgagggg
 2940
 gtagcaggta agatgccgca gcccctgcct ccaatgtgct ggttcagccg gggcagtgcc
 3000
 catgtgaatc tggcaaggtg tttacagtg tgggcttgaa agtccaaacc aaaaaaaaaa
 3059

<210> 5040

<211> 616

<212> PRT

<213> Homo sapiens

<400> 5040

Met	Leu	Leu	Gly	Ala	Ser	Leu	Val	Gly	Val	Leu	Leu	Phe	Ser	Lys	Leu
1			5					10						15	
Val	Leu	Lys	Leu	Pro	Trp	Thr	Gln	Val	Gly	Phe	Ser	Leu	Leu	Phe	Leu
			20					25						30	
Tyr	Leu	Gly	Ser	Gly	Gly	Trp	Arg	Phe	Ile	Arg	Val	Phe	Ile	Lys	Thr
			35					40						45	
Ile	Arg	Arg	Asp	Ile	Phe	Gly	Gly	Leu	Val	Leu	Leu	Lys	Val	Lys	Ala
			50					55						60	
Lys	Val	Arg	Gln	Cys	Leu	Gln	Glu	Arg	Arg	Thr	Val	Pro	Ile	Leu	Phe
										75				80	
Ala	Ser	Thr	Val	Arg	Arg	His	Pro	Asp	Lys	Thr	Ala	Leu	Ile	Phe	Glu
										90				95	
Gly	Thr	Asp	Thr	His	Trp	Thr	Phe	Arg	Gln	Leu	Asp	Glu	Tyr	Ser	Ser
										105				110	
Ser	Val	Ala	Asn	Phe	Leu	Gln	Ala	Arg	Gly	Leu	Ala	Ser	Gly	Asp	Val

115	120	125
Ala Ala Ile Phe Met Glu Asn Arg Asn Glu Phe Val Gly Leu Trp Leu		
130	135	140
Gly Met Ala Lys Leu Gly Val Glu Ala Ala Leu Ile Asn Thr Asn Leu		
145	150	155
Arg Arg Asp Ala Leu Leu His Cys Leu Thr Thr Ser Arg Ala Arg Ala		
165	170	175
Leu Val Phe Gly Ser Glu Met Ala Ser Ala Ile Cys Glu Val His Ala		
180	185	190
Ser Pro Asp Pro Ser Leu Ser Leu Phe Cys Ser Gly Ser Trp Glu Pro		
195	200	205
Gly Ala Val Pro Pro Ser Thr Glu His Leu Asp Pro Leu Leu Lys Asp		
210	215	220
Ala Pro Lys His Leu Pro Ser Cys Pro Asp Lys Gly Phe Thr Asp Lys		
225	230	235
Leu Phe Tyr Ile Tyr Thr Ser Gly Thr Thr Gly Leu Pro Lys Ala Ala		
245	250	255
Ile Val Val His Ser Arg Tyr Tyr Arg Met Ala Ala Leu Val Tyr Tyr		
260	265	270
Gly Phe Arg Met Arg Pro Asn Asp Ile Val Tyr Asp Cys Leu Pro Leu		
275	280	285
Tyr His Ser Ala Gly Asn Ile Val Gly Ile Gly Gln Cys Leu Leu His		
290	295	300
Gly Met Thr Val Val Ile Arg Lys Lys Phe Ser Ala Ser Arg Phe Trp		
305	310	315
Asp Asp Cys Ile Lys Tyr Asn Cys Thr Ile Val Gln Tyr Ile Gly Glu		
325	330	335
Leu Cys Arg Tyr Leu Leu Asn Gln Pro Pro Arg Glu Ala Glu Asn Gln		
340	345	350
His Gln Val Arg Met Ala Leu Gly Asn Ala Ser Gly Ser Pro Ser Gly		
355	360	365
Pro Thr Phe Pro Ala Ala Ser Thr Tyr Pro Arg Trp Leu Ser Ser Thr		
370	375	380
Gly Pro Glu Cys Asn Cys Ser Leu Gly Asn Phe Asp Ser Gln Val Gly		
385	390	395
Ala Cys Gly Phe Asn Ser Arg Ile Leu Ser Phe Val Tyr Pro Ile Arg		
405	410	415
Leu Val Arg Val Asn Glu Asp Thr Met Glu Leu Ile Arg Gly Pro Asp		
420	425	430
Gly Val Cys Ile Pro Cys Gln Pro Gly Glu Pro Gly Gln Leu Val Gly		
435	440	445
Arg Ile Ile Gln Lys Asp Pro Leu Arg Arg Phe Asp Gly Tyr Leu Asn		
450	455	460
Gln Gly Ala Asn Asn Lys Lys Ile Ala Lys Asp Val Phe Lys Lys Gly		
465	470	475
Asp Gln Ala Tyr Leu Thr Gly Asp Val Leu Val Met Asp Glu Leu Gly		
485	490	495
Tyr Leu Tyr Phe Arg Asp Arg Thr Gly Asp Thr Phe Arg Trp Lys Gly		
500	505	510
Glu Asn Val Ser Thr Thr Glu Val Glu Gly Thr Leu Ser Arg Leu Leu		
515	520	525
Asp Met Ala Asp Val Ala Val Tyr Gly Val Glu Val Pro Gly Thr Glu		
530	535	540
Gly Arg Ala Gly Met Ala Ala Val Ala Ser Pro Thr Gly Asn Cys Asp		

545					550					555				560	
Leu	Glu	Arg	Phe	Ala	Gln	Val	Leu	Glu	Lys	Glu	Leu	Pro	Leu	Tyr	Ala
				565					570					575	
Arg	Pro	Ile	Phe	Leu	Arg	Leu	Leu	Pro	Glu	Leu	His	Lys	Thr	Gly	Thr
			580					585					590		
Tyr	Lys	Phe	Gln	Lys	Thr	Glu	Leu	Arg	Lys	Glu	Ala	Phe	Asp	Pro	Ala
		595					600					605			
Ile	Val	Lys	Thr	Arg	Cys	Ser	Ile								
	610					615									

<210> 5041

<211> 2461

<212> DNA

<213> Homo sapiens

<400> 5041

ctcgcgatag cgaccgggag cagggcgcg ggccgggaccc aggtccgagg cgaggaagcc
 60
 ggaagccagg cgcggggagc ctcccccttc gactgcagcc tcgctccgtg ccttctgcgc
 120
 gcctgggata ccggagcctg cctaggttct gtgcgctccc gcccaggccg gtgcccgcgc
 180
 cccgcctgcg cccaggcag gtcccaggcc tccggctgct cccggccgaa ggtggggaca
 240
 ggcagtggca ggcaccacta gcgagggcgt ttgggaaccc aggggtgacca cggcgcagcc
 300
 atggggaccg cgcttgtgta ccatgaggac atgacggcca cccggctgct ctgggacgac
 360
 cccgagtgcg agatcgagcg tcctgagcgc ctgaccgcag ccctggatcg cctgcggcag
 420
 cgcggccttg aacagagggt tctgcggttg tcagcccgcg aggcctcgga agaggagctg
 480
 ggcctggtgc acagcccaga gtatgtatcc ctggtcaggg agaccaggt cctaggcaag
 540
 gaggagctgc aggcgctgtc cggacagttc gacgccatct acttccaccc gagtaccttt
 600
 cactgcgcgc ggctggccgc aggggctgga ctgcagctgg tggacgctgt gctcactgga
 660
 gctgtgcaaa atgggcttgc cctggtgagg cctcccgggc accatggcca gagggcggct
 720
 gccaacgggt tctgcgtgtt caacaacgtg gccatagcag ctgcacatgc caagcagaaa
 780
 cacgggctac acaggatcct cgctgtggac tgggatgtgc accatggcca ggggatccag
 840
 tatctctttg aggatgacct cagcgtcctt tacttctcct ggcaccgcta tgagcatggg
 900
 cgcttctggc ctttctgcg agagtcagat gcagacgcag tggggcgggg acagggcctc
 960
 ggcttactg tcaacctgcc ctggaaccag gttgggatgg gaaacgctga ctacgtggct
 1020
 gccttctgc acctgctgct cccactggcc tttgagtttg accctgagct ggtgctggtc
 1080
 tcggcaggat ttgactcagc catcggggac cctgaggggc aaatgcaggc cagccagag
 1140

tgcttcgccc acctcacaca gctgctgcag gtgctggccg gcggccgggt ctgtgccgtg
 1200
 ctggaggcg gctaccacct ggagtcactg gcggagtcag tgtgcatgac agtacagacg
 1260
 ctgctgggtg acccggtccc acccctgtca gggccaatgg cgccatgtca gaggtgagag
 1320
 gggagtgcac tagagtccat ccagagtgcc cgtgctgccc agggcccgca ctggaagagc
 1380
 ctccagcagc aagatgtgac cgctgtgccc atgagcccca gcagccactc cccagagggg
 1440
 aggcctccac ctctgctgcc tgggggtcca gtgtgtaagg cagctgcac tgcaccgagc
 1500
 tccctcctgg accagccgtg cctctgcccc gcaccctctg tccgaccgc tgttgccctg
 1560
 acaacgccgg atatcacatt gggtctgccc cctgacgtca tccaacagga agcgtcagcc
 1620
 ctgagggagg agacagaagc ctggggccagg ccacacgagt ccctggcccg ggaggaggcc
 1680
 ctactgcac ttgggaagct cctgtacctc ttagatggga tgcaggatgg gcaggatgaac
 1740
 agtggatatag cagccactcc agcctctgct gcagcagcca ccctggatgt ggctgttcgg
 1800
 agaggcctgt cccacggagc ccagaggctg ctgtgcgtgg ccctgggaca gctggaccgg
 1860
 cctccagacc tcgcccataa cgggaggagt ctgtggctga acatcagggg caaggaggcg
 1920
 gctgccctat ccatgttcca tgtctccacg ccactgccag tgatgaccgg tggtttctctg
 1980
 agctgcatct tgggcttggt gctgcccctg gcctatggct tccagcctga cctggtgctg
 2040
 gtggcgctgg ggctggcca tggcctgcag gggcccccag ctgcactcct ggctgcaatg
 2100
 cttcgggggc tggcaggggg ccgagtccctg gccctcctgg aggagaactc cacaccccag
 2160
 ctgacagga tccctggccc ggtgctgaat ggagaggcac ctctagcct aggcccttcc
 2220
 tctgtggcct cccagagga cgtccaggcc ctgatgtacc tgagagggca gctggagcct
 2280
 cagtgaaga tgttcagtg ccacccacac ctgggtggctt gaaatcggcc aaggtgggag
 2340
 catttacacc gcagaaatga caccgcacgc cagcggcccg cggccgcgat ccggacccca
 2400
 agcccacggc tccctcgact ctggggcacg gaaccccgcc cactcccaat ccctggcgcg
 2460
 c
 2461

<210> 5042

<211> 686

<212> PRT

<213> Homo sapiens

<400> 5042

Arg Gly Arg Leu Gly Thr Gln Gly Asp His Gly Ala Ala Met Gly Thr

1 5 10 15
 Ala Leu Val Tyr His Glu Asp Met Thr Ala Thr Arg Leu Leu Trp Asp
 20 25 30
 Asp Pro Glu Cys Glu Ile Glu Arg Pro Glu Arg Leu Thr Ala Ala Leu
 35 40 45
 Asp Arg Leu Arg Gln Arg Gly Leu Glu Gln Arg Cys Leu Arg Leu Ser
 50 55 60
 Ala Arg Glu Ala Ser Glu Glu Glu Leu Gly Leu Val His Ser Pro Glu
 65 70 75 80
 Tyr Val Ser Leu Val Arg Glu Thr Gln Val Leu Gly Lys Glu Glu Leu
 85 90 95
 Gln Ala Leu Ser Gly Gln Phe Asp Ala Ile Tyr Phe His Pro Ser Thr
 100 105 110
 Phe His Cys Ala Arg Leu Ala Ala Gly Ala Gly Leu Gln Leu Val Asp
 115 120 125
 Ala Val Leu Thr Gly Ala Val Gln Asn Gly Leu Ala Leu Val Arg Pro
 130 135 140
 Pro Gly His His Gly Gln Arg Ala Ala Ala Asn Gly Phe Cys Val Phe
 145 150 155 160
 Asn Asn Val Ala Ile Ala Ala Ala His Ala Lys Gln Lys His Gly Leu
 165 170 175
 His Arg Ile Leu Val Val Asp Trp Asp Val His His Gly Gln Gly Ile
 180 185 190
 Gln Tyr Leu Phe Glu Asp Asp Pro Ser Val Leu Tyr Phe Ser Trp His
 195 200 205
 Arg Tyr Glu His Gly Arg Phe Trp Pro Phe Leu Arg Glu Ser Asp Ala
 210 215 220
 Asp Ala Val Gly Arg Gly Gln Gly Leu Gly Phe Thr Val Asn Leu Pro
 225 230 235 240
 Trp Asn Gln Val Gly Met Gly Asn Ala Asp Tyr Val Ala Ala Phe Leu
 245 250 255
 His Leu Leu Leu Pro Leu Ala Phe Glu Phe Asp Pro Glu Leu Val Leu
 260 265 270
 Val Ser Ala Gly Phe Asp Ser Ala Ile Gly Asp Pro Glu Gly Gln Met
 275 280 285
 Gln Ala Thr Pro Glu Cys Phe Ala His Leu Thr Gln Leu Leu Gln Val
 290 295 300
 Leu Ala Gly Gly Arg Val Cys Ala Val Leu Glu Gly Gly Tyr His Leu
 305 310 315 320
 Glu Ser Leu Ala Glu Ser Val Cys Met Thr Val Gln Thr Leu Leu Gly
 325 330 335
 Asp Pro Ala Pro Pro Leu Ser Gly Pro Met Ala Pro Cys Gln Arg Cys
 340 345 350
 Glu Gly Ser Ala Leu Glu Ser Ile Gln Ser Ala Arg Ala Ala Gln Ala
 355 360 365
 Pro His Trp Lys Ser Leu Gln Gln Gln Asp Val Thr Ala Val Pro Met
 370 375 380
 Ser Pro Ser Ser His Ser Pro Glu Gly Arg Pro Pro Pro Leu Leu Pro
 385 390 395 400
 Gly Gly Pro Val Cys Lys Ala Ala Ala Ser Ala Pro Ser Ser Leu Leu
 405 410 415
 Asp Gln Pro Cys Leu Cys Pro Ala Pro Ser Val Arg Thr Ala Val Ala
 420 425 430
 Leu Thr Thr Pro Asp Ile Thr Leu Val Leu Pro Pro Asp Val Ile Gln

435 440 445
 Gln Glu Ala Ser Ala Leu Arg Glu Glu Thr Glu Ala Trp Ala Arg Pro
 450 455 460
 His Glu Ser Leu Ala Arg Glu Glu Ala Leu Thr Ala Leu Gly Lys Leu
 465 470 475 480
 Leu Tyr Leu Leu Asp Gly Met Leu Asp Gly Gln Val Asn Ser Gly Ile
 485 490 495
 Ala Ala Thr Pro Ala Ser Ala Ala Ala Thr Leu Asp Val Ala Val
 500 505 510
 Arg Arg Gly Leu Ser His Gly Ala Gln Arg Leu Leu Cys Val Ala Leu
 515 520 525
 Gly Gln Leu Asp Arg Pro Pro Asp Leu Ala His Asp Gly Arg Ser Leu
 530 535 540
 Trp Leu Asn Ile Arg Gly Lys Glu Ala Ala Ala Leu Ser Met Phe His
 545 550 555 560
 Val Ser Thr Pro Leu Pro Val Met Thr Gly Gly Phe Leu Ser Cys Ile
 565 570 575
 Leu Gly Leu Val Leu Pro Leu Ala Tyr Gly Phe Gln Pro Asp Leu Val
 580 585 590
 Leu Val Ala Leu Gly Pro Gly His Gly Leu Gln Gly Pro His Ala Ala
 595 600 605
 Leu Leu Ala Ala Met Leu Arg Gly Leu Ala Gly Gly Arg Val Leu Ala
 610 615 620
 Leu Leu Glu Glu Asn Ser Thr Pro Gln Leu Ala Gly Ile Leu Ala Arg
 625 630 635 640
 Val Leu Asn Gly Glu Ala Pro Pro Ser Leu Gly Pro Ser Ser Val Ala
 645 650 655
 Ser Pro Glu Asp Val Gln Ala Leu Met Tyr Leu Arg Gly Gln Leu Glu
 660 665 670
 Pro Gln Trp Lys Met Leu Gln Cys His Pro His Leu Val Ala
 675 680 685

<210> 5043

<211> 1824

<212> DNA

<213> Homo sapiens

<400> 5043

gccggtggca cgacagttgc tgcagggaaat cttttaaacg agagcgagaa ggactgcggg
 60
 caggaccggc gggctcctgg ggttcagccg tgccgcctcg ttacgatgac cagtgtggtt
 120
 aagacagtgt atagcctgca gccccctct gcgctgagcg gcggccagcc ggcagacaca
 180
 caaactcggg ccacttctaa gagtctctta cctgttaggt ccaaagaagt cgatgtttcc
 240
 aaacagcttc attcaggagg tccagagaat gatgttataa aaatcaccaa actgagacga
 300
 gagaatgggc aaatgaaagc tactgacact gccaccagaa ggaatgtcag aaaaggctac
 360
 aaaccactga gtaagcaaaa atcagaggaa gagctcaagg acaagaacca gctgttagaa
 420
 gccgtcaaca agcagttgca ccagaagttg actgaaactc agggagagct gaaggacctg
 480

accagaagg tagagctgct ggagaagttt cgggacaact gtttggcaat tttggagagc
540
aagggccttg atccagcttt aggcagtgag accctggcat cgcacaaga atccactact
600
gatcacatgg actctatggt gctgttagaa actttgcaag aggagctgaa gctttttaac
660
gaaacagcca aaaagcagat ggaggagtta caggccttaa aggtaaagct ggagatgaaa
720
gaggaaagag tccgattcct agaacagcaa accttatgta acaatcaagt aaatgattta
780
acaacagccc ttaaggaaat ggagcagcta ttagaaatgt aagaagaagc aagtggccag
840
atggctccct cttgggcata aaatctcaga ggaagctact taggacatca tcttggccat
900
gatcttcttg gactcacat ctccagaatg aaaacaattt ctacagtaga cttaaggaca
960
gtttatgctg aaatggcaat tctcattta agcaagtttt cccaaccttc aggttggta
1020
gccctcctga gcctcacagg tggataattg aggcctacaa gagaggggag cctaggagct
1080
tggattgacc ttctagtcaa ccacctgact tcagcacacc attacaatcg ggagactaaa
1140
ccaacaacca gaggatctaa aatgtcacat tcagattttc aggaagaaaa tcttcattac
1200
agtggagcac aaatgttcca tacaagacat cattgaggag ccatgctgtc cccttctaac
1260
ctgaaacaca ttctttccca tcctggttgg gcttctgtac ctcttatta atttatgaac
1320
ctgaagttgc ttgaagtgtt ttgggcttaa taaatggggt gaaagtatag gtagcagtaa
1380
cacctacatg aaacaatata ccttgatctt tttaatctaa attacttttc ttttttaagt
1440
ctacttttaa aataaatact tctgtaaata ttctgactgt aacattgaga aatgaaaata
1500
gccttttaac ctatgatgt cagttgatca ttattgaact aatttagtta acaagtccaa
1560
gatattctga cttaatctag aatatttttc tgctactctt taagagtcct gtggctagtc
1620
cctctgtctc ccaagagcat tggctagtct cctgagggtg ttgccattt gtagcagtgg
1680
tttcaccagg tctgtggcca cttgctgccc atgttttccc tgcactccag cctgggtgac
1740
aagagcaaga ctccatctct aaataaataa ataaataaat aaataaataa ataaataaat
1800
aaaatagttg aaatggcaaa cttt
1824

<210> 5044

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5044

Ala Gly Gly Thr Thr Val Ala Ala Gly Asn Leu Leu Asn Glu Ser Glu

1 5 10 15
 Lys Asp Cys Gly Gln Asp Arg Arg Ala Pro Gly Val Gln Pro Cys Arg
 20 25 30
 Leu Val Thr Met Thr Ser Val Val Lys Thr Val Tyr Ser Leu Gln Pro
 35 40 45
 Pro Ser Ala Leu Ser Gly Gly Gln Pro Ala Asp Thr Gln Thr Arg Ala
 50 55 60
 Thr Ser Lys Ser Leu Leu Pro Val Arg Ser Lys Glu Val Asp Val Ser
 65 70 75 80
 Lys Gln Leu His Ser Gly Gly Pro Glu Asn Asp Val Thr Lys Ile Thr
 85 90 95
 Lys Leu Arg Arg Glu Asn Gly Gln Met Lys Ala Thr Asp Thr Ala Thr
 100 105 110
 Arg Arg Asn Val Arg Lys Gly Tyr Lys Pro Leu Ser Lys Gln Lys Ser
 115 120 125
 Glu Glu Glu Leu Lys Asp Lys Asn Gln Leu Leu Glu Ala Val Asn Lys
 130 135 140
 Gln Leu His Gln Lys Leu Thr Glu Thr Gln Gly Glu Leu Lys Asp Leu
 145 150 155 160
 Thr Gln Lys Val Glu Leu Leu Glu Lys Phe Arg Asp Asn Cys Leu Ala
 165 170 175
 Ile Leu Glu Ser Lys Gly Leu Asp Pro Ala Leu Gly Ser Glu Thr Leu
 180 185 190
 Ala Ser Arg Gln Glu Ser Thr Thr Asp His Met Asp Ser Met Leu Leu
 195 200 205
 Leu Glu Thr Leu Gln Glu Glu Leu Lys Leu Phe Asn Glu Thr Ala Lys
 210 215 220
 Lys Gln Met Glu Glu Leu Gln Ala Leu Lys Val Lys Leu Glu Met Lys
 225 230 235 240
 Glu Glu Arg Val Arg Phe Leu Glu Gln Gln Thr Leu Cys Asn Asn Gln
 245 250 255
 Val Asn Asp Leu Thr Thr Ala Leu Lys Glu Met Glu Gln Leu Leu Glu
 260 265 270
 Met

<210> 5045

<211> 462

<212> DNA

<213> Homo sapiens

<400> 5045

cataaatggg acatttactt cacaagctgt tttcccaggg tcttcctctg ggtatgtctg

60

aaatataaaa atctggactg ggattgaaga ttgtgtttac aaatgctttt gaataggatt

120

tctcctgcag ttgttacgta gcttttcaga aacacacaaa ctacaaataa tgaacaacat

180

ctgcaatgat tcggcagggt ggcagcatcc acgctctcca cccaaaccct ggtgggattt

240

ggagaggccg ctggtgggca gaggttgccc ctaagcatgg cagcctccgg cttactgcac

300

ccagcctgtg gggcggtca gtagcccggtg acatggtggc ctgttgtctc ttctcttgtt

360

ctagtaagca ctatcctttg tactccctca acgtggcctc catgtggttg aagctagggg
 420
 gactctacat gggcctggaa cacaaagccg ctagggatga aa
 462

<210> 5046
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 5046
 Met Ile Arg Gln Gly Gly Ser Ile His Ala Leu His Pro Asn Pro Gly
 1 5 10 15
 Gly Ile Trp Arg Gly Arg Trp Trp Ala Glu Val Gly Pro Lys His Gly
 20 25 30
 Ser Leu Arg Leu Thr Ala Pro Ser Leu Trp Gly Gly Ser Val Ala Arg
 35 40 45
 Asp Met Val Ala Cys Cys Leu Phe Ser Cys Ser Ser Lys His Tyr Pro
 50 55 60
 Leu Tyr Ser Leu Asn Val Ala Ser Met Trp Leu Lys Leu Gly Arg Leu
 65 70 75 80
 Tyr Met Gly Leu Glu His Lys Ala Ala Arg Asp Glu
 85 90

<210> 5047
 <211> 3380
 <212> DNA
 <213> Homo sapiens

<400> 5047
 gggctgcggt cctcggagcg cttctgcagc ccgggcaaag gccggnngct gcgggctctg
 60
 cagcccttcc aggtggggga cttgctgttc tcctgcccgg cctatgccta cgtgctcacg
 120
 gtcaacgagc ggggcaacca ctgcgagtac tgcttcacca ggaaagaagg attgtccaaa
 180
 tgtggaagat gcaagcaggc attttactgc aatgtggagt gtcagaaaga agattggccc
 240
 atgcacaagc tggaatgttc tcccatgggt gtttttgggg aaaactggaa tccctcggag
 300
 actgtaagac taacagcaag gattctggcc aaacagaaaa tccaccaga gagaacacct
 360
 tcggaaaaat tgtagctgt gaaggagttt gaatcacatc tggataagtt agacaatgag
 420
 aagaaggatt tgattcagag tgacatagct gctctccatc acttttactc caagcatctc
 480
 gaattccctg acaatgatag cctcgtagta ctctttgcac aggttaactg taatggcttc
 540
 acaattgaag atgaagaact ttctcatttg ggatcagcga tatttctctga tgttgcatc
 600
 atgaatcata gctgttgccc caatgtcatt gtgacctaca aagggaccct ggcagaagtc
 660
 agagctgtac aggaaatcaa gccgggagag gaggttttta ccagctatat tgatctcctg
 720

tacccaacgg aagatagaaa tgaccgggta agagattcctt atttctttac ctgtgagtgc
780
caggagtgtgta ccaccaagga caaggataag gccaaaggagg aaatccggaa gctcagcgat
840
ccccaaagg cagaagccat ccgagacatg gtcagatatg cacgcaacgt cattgaagag
900
ttccggaggg ccaagcacta taaatccctt agtgagctgc tggagatctg cgagctcagc
960
caggagaaga tgagctctgt gtttgaggac agtaacgtgt acatgttgca catgatgtac
1020
caggccatgg gtgtctgctt gtacatgcag gactgggaag gagccctgca atatggacag
1080
aaaatcatta agccctacag taagcactat cctttgtact ccctcaacgt ggctccatg
1140
tggttgaagc tagggagact ctacatgggc ctggaacaca aagccgcagg ggagaaagcc
1200
ctgaagaagg ccattgcaat catggaagta gctcacggca aagatcatcc atatatttct
1260
gagatcaaac aggaaattga aagccactga aactatgcag catttcagtt ttcatttaaa
1320
cacttagttc agaaacctta aaggatttga atatttcaaa ttgcacacgt cactccagca
1380
tctctgtaaa ataattggaa tgaaaatact tcttgcaactt aaacactgca catgccgtac
1440
tttgagggtta gtctgaatct tgaactttaa taccaaatta attttgaatg cttttgtttc
1500
ctaagagata atggcatggt ttcatatggt atactttgga cagacagagt tttaaaaatg
1560
gaattatattt ttctttcatg cctcttgtaa tgttctgaac aaacttgaat gatgaaagta
1620
ttaaagagat atcagtattt gaggtttgta ttttcttctg tctctgggga ggatttctca
1680
gtggtgggtg gagcccagtc ttggagtga agtgacacct gctgtccata attcagcaag
1740
ctcaagtctt ctccatggga ctggggctgg gcagcctctt tattctgcag ttgctcttgt
1800
ggggctgtgc ctgtggagga agaaaatggg aagaaagaga aaaagggtaca caaaggaaag
1860
aaaactatca tctatctgtg gtggaggaac agtccagtga cccaagtgcc ctccagcagg
1920
cgagggtttg aatctgttct ctgggtgcctg gtattccttc agtgtgtaaa ggtgcttagt
1980
gcgtgctttg ctttcttggc ttttctgtcc ccatctgtct gaaagcagac ttgccatctc
2040
tcattctggt gattgttctg tgcagtactc tcctttttgg aaaaactcca gggtagtctt
2100
gggaaggaaa aaaatttttt tccttaccaa ccaacgctgt gttgttgagt aaacactgat
2160
ctctaccac acagacaaca ggaatccagc tttctgcagc ccacagcct agacagcagc
2220
aacctgggga gttgtttgtt agcaaccatt gcacagaagg acgcagcaca cgttcctgag
2280
tgcaggggtg ttactcttag aaaagcgtct ttagtgcgaa agagaggaac ttccccactg
2340

gttaataagt aaagcctgtt gaaatttaca tgtcaattac ctttcatagt catgggtccga
 2400
 aaacagctag aacagctgta aatctggtac attttccttc cctcctcatc tacacgcacc
 2460
 cacatcttca cacacactca tgccccctctt tcacacgcag ttgctgcac acagtgggat
 2520
 ttagcagata gaatgcattc tcttgctctg tgtagtccaa taagacattt actgaacacc
 2580
 tgggtactatc tatgctaaat gctctgaata gctctctagg tgcaaagaga agagtaaggc
 2640
 atgggtcccag atcagtggaa cttagggtttt aagaatgttc atttactata cattctgtga
 2700
 cgaagcctaa aataaactta gcctaccatc tctatagggt ttataaaaatt tgcaaaagta
 2760
 atccttttctc agtaaattca agtaatggaa atgtatatga aaaaagtaaa cttctttgtt
 2820
 cttcaccagt cccactgcgt ggagctaact gccataaaca gtttgcttta tatgggtccca
 2880
 gggtttttcca ttctggatg atgatgtagc tatataaata gatttagaag aacaaagaca
 2940
 ggatgggtact gacataggat tttgtaacgt gcttctccaa acgaacaaaa tggatctctt
 3000
 tgcatttcag cacttacaga tttgcctcat tctatttaga ggcagaatat tgcattggat
 3060
 gcatgtcatc atggactcgg tacttctatt tatggacagg aggttttttt tcccagtttg
 3120
 ctgctattac aaacaatgcc acaatgaatg atctgaaaca taaaactttg cgttgtgtgg
 3180
 tagcattttg gggaatagat tcctggaagt gcaatttcaa gatccaatag tgggaatatt
 3240
 tttaaaattt gaataaatat agccacattt ccttttgtaa aaaaaaaaaa aaaactgcat
 3300
 cagatacaaa taagatagat ataatagtat ttgctttcct ctcctcata acgttgtatt
 3360
 atcattaataa tgtttttggc
 3380

<210> 5048

<211> 429

<212> PRT

<213> Homo sapiens

<400> 5048

Gly	Ser	Arg	Ser	Ser	Glu	Arg	Phe	Cys	Ser	Pro	Gly	Lys	Gly	Arg	Xaa
1				5					10					15	
Leu	Arg	Ala	Leu	Gln	Pro	Phe	Gln	Val	Gly	Asp	Leu	Leu	Phe	Ser	Cys
			20					25					30		
Pro	Ala	Tyr	Ala	Tyr	Val	Leu	Thr	Val	Asn	Glu	Arg	Gly	Asn	His	Cys
			35				40					45			
Glu	Tyr	Cys	Phe	Thr	Arg	Lys	Glu	Gly	Leu	Ser	Lys	Cys	Gly	Arg	Cys
			50			55					60				
Lys	Gln	Ala	Phe	Tyr	Cys	Asn	Val	Glu	Cys	Gln	Lys	Glu	Asp	Trp	Pro
65					70				75					80	
Met	His	Lys	Leu	Glu	Cys	Ser	Pro	Met	Val	Val	Phe	Gly	Glu	Asn	Trp

				85					90					95		
Asn	Pro	Ser	Glu	Thr	Val	Arg	Leu	Thr	Ala	Arg	Ile	Leu	Ala	Lys	Gln	
			100					105					110			
Lys	Ile	His	Pro	Glu	Arg	Thr	Pro	Ser	Glu	Lys	Leu	Leu	Ala	Val	Lys	
		115					120					125				
Glu	Phe	Glu	Ser	His	Leu	Asp	Lys	Leu	Asp	Asn	Glu	Lys	Lys	Asp	Leu	
		130				135					140					
Ile	Gln	Ser	Asp	Ile	Ala	Ala	Leu	His	His	Phe	Tyr	Ser	Lys	His	Leu	
145					150					155					160	
Glu	Phe	Pro	Asp	Asn	Asp	Ser	Leu	Val	Val	Leu	Phe	Ala	Gln	Val	Asn	
			165					170						175		
Cys	Asn	Gly	Phe	Thr	Ile	Glu	Asp	Glu	Glu	Leu	Ser	His	Leu	Gly	Ser	
		180						185					190			
Ala	Ile	Phe	Pro	Asp	Val	Ala	Leu	Met	Asn	His	Ser	Cys	Cys	Pro	Asn	
		195					200					205				
Val	Ile	Val	Thr	Tyr	Lys	Gly	Thr	Leu	Ala	Glu	Val	Arg	Ala	Val	Gln	
		210				215					220					
Glu	Ile	Lys	Pro	Gly	Glu	Glu	Val	Phe	Thr	Ser	Tyr	Ile	Asp	Leu	Leu	
225					230					235					240	
Tyr	Pro	Thr	Glu	Asp	Arg	Asn	Asp	Arg	Leu	Arg	Asp	Ser	Tyr	Phe	Phe	
			245					250						255		
Thr	Cys	Glu	Cys	Gln	Glu	Cys	Thr	Thr	Lys	Asp	Lys	Asp	Lys	Ala	Lys	
		260						265					270			
Val	Glu	Ile	Arg	Lys	Leu	Ser	Asp	Pro	Pro	Lys	Ala	Glu	Ala	Ile	Arg	
		275					280					285				
Asp	Met	Val	Arg	Tyr	Ala	Arg	Asn	Val	Ile	Glu	Glu	Phe	Arg	Arg	Ala	
	290					295					300					
Lys	His	Tyr	Lys	Ser	Pro	Ser	Glu	Leu	Leu	Glu	Ile	Cys	Glu	Leu	Ser	
305					310					315					320	
Gln	Glu	Lys	Met	Ser	Ser	Val	Phe	Glu	Asp	Ser	Asn	Val	Tyr	Met	Leu	
			325					330						335		
His	Met	Met	Tyr	Gln	Ala	Met	Gly	Val	Cys	Leu	Tyr	Met	Gln	Asp	Trp	
		340						345					350			
Glu	Gly	Ala	Leu	Gln	Tyr	Gly	Gln	Lys	Ile	Ile	Lys	Pro	Tyr	Ser	Lys	
		355					360					365				
His	Tyr	Pro	Leu	Tyr	Ser	Leu	Asn	Val	Ala	Ser	Met	Trp	Leu	Lys	Leu	
	370					375					380					
Gly	Arg	Leu	Tyr	Met	Gly	Leu	Glu	His	Lys	Ala	Ala	Gly	Glu	Lys	Ala	
385					390					395					400	
Leu	Lys	Lys	Ala	Ile	Ala	Ile	Met	Glu	Val	Ala	His	Gly	Lys	Asp	His	
			405						410					415		
Pro	Tyr	Ile	Ser	Glu	Ile	Lys	Gln	Glu	Ile	Glu	Ser	His				

<210> 5049

<211> 2422

<212> DNA

<213> Homo sapiens

<400> 5049

naqatcttct cgcagcgcac ctcccccttc atcgattaca cctatgacag cgacatactg

60

80 aagggcaact tctcaatccg tacagccaag atgcagcagc atgtgtgtga aaccatcatc

120

cgcatcttta aaagacatgg agctgttcag ttgtgtactc cactactgct tccccgaaac
180
agacaaatat atgagcacia cgaatctgcc ctattcatgg accacagcgg gatgctggtg
240
atgcttcctt ttgacctgcg gatccctttt gcaagatatg tggcaagaaa taatatattg
300
aattttaaac gatactgcat agaacgtgtg ttcaggccgc gcaagttaga tgcatttcac
360
cccaaagaac ttctggagtg tgcatttgat attgtcactt ctaccaccaa cagctttctg
420
cccactgctg aaattatcta cactatctat gaaatcatcc aagagtttcc agcacttcag
480
gaaagaaatt acagtattta tttgaacat accatgttat tgaaagcaat actcttacac
540
tgtgggatcc cagaagataa actcagtcac gtctacatta ttctgtatga tgctgtgaca
600
gagaagctga cgaggagaga agtggaagct aaattttgta atctgtctgt gtcttcta
660
agtntctgtg cgactctaca angtttattg aacagaaggg agattntgc aagatcttat
720
gccaacaatn naaattcatt aataaaacag aaaacaggta ttgcacagtt ggtgaagtat
780
ggcttaaaag acctagagga ggttgttgga ctgttggaaga aactcggcat caagttacag
840
gtcttgatca atttgggctt ggtttacaag gtgcagcagc acaatggaat catcttcag
900
tttgtggctt tcatcaaacg aaggcaaagg gctgtacctg aaatcctcgc agctggaggc
960
agatatgacc tgctgattcc ccagtttaga gggccacaag ctctggggcc agtcccact
1020
gccattgggg tcagcatagc tatagacaag atatctgctg ctgtcctcaa catggaggaa
1080
tctgttacaa taagctcttg tgacctctg gttgtaagtg ttggtcagat gtctatgtcc
1140
agggccatca acctaaccca gaaactctgg acagcaggca tcacagcaga aatcatgtac
1200
gactggtcac agtcccaaga ggaattacaa gagtactgca gacatcatga aatcacctat
1260
gtggcccttg tctcgataa agaaggaagc catgtcaagg ttaagtctt cgagaaggaa
1320
aggcagacag agaagcgtgt gctggagact gaacttggtg accatgtact gcagaaactg
1380
aggactaaag tcatgatga aaggaatggc agagaagctt ccgataatct tgcagtgcaa
1440
aatctgaagg ggtcattttc taatgcttca ggtttggttg aaatccatgg agcaacagtg
1500
gttcccattg tgagtgtgct agccccggag aagctgtcag ccagcactag gaggcgctat
1560
gaaactcagg taaaaactcg acttcagacc tcccttgcca acttacatca gaaaagcagt
1620
gaaattgaaa ttctggctgt ggatctaccc aaagaaacaa tattacagtt tttatcatta
1680
gagtgggatg ctgatgaaca ggcatttaac acaactgtga agcagctgct gtcacgcctg
1740

ccaaagcaaa gatacctcaa attagtctgt gatgaaattht ataacatcaa agtagaaaa
 1800
 aagggtgtctg tgctatttct gtacagctat agagatgact actacagaat cttattttta
 1860
 ccctaaagaa ctgtcggtta cctcattcaa acagacagag gcttatactg gaataatgga
 1920
 atgttgtaca ttcatcataa tttaaaatta aattctaaga agaggctggg tgcagtggct
 1980
 cacaccttta atcccagcac tttgggaagc caaggcagga agactgcttg aaaccaggag
 2040
 tttgagacca gcttgagcaa caaagcaaga ccccatctct ataaaaacta aaaaaattag
 2100
 ttgggcatgg tggcacatgc ctgtagtccc agctactcca gaggctgaga tggatcatct
 2160
 gagcctcagg aggttgaggc tgcagtgagc tgtgactgcg ccactgcact ccagtctggg
 2220
 acaacagagc aagaccctgt cttaaaaaaa aaaagaaaaa aaaaattttt ttctaagaag
 2280
 ctgtcctaca aagttgagct ttgttagttt ttcatgtgta atatattata aatttatctt
 2340
 ttgggatata ataatgctt tcatataaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2400
 aaaaaaaaaa aaaaaaaaaa aa
 2422

<210> 5050

<211> 619

<212> PRT

<213> Homo sapiens

<400> 5050

Xaa	Ile	Phe	Ser	Gln	Arg	Ile	Ser	Pro	Ser	Ile	Asp	Tyr	Thr	Tyr	Asp
1			5					10						15	
Ser	Asp	Ile	Leu	Lys	Gly	Asn	Phe	Ser	Ile	Arg	Thr	Ala	Lys	Met	Gln
			20					25					30		
Gln	His	Val	Cys	Glu	Thr	Ile	Ile	Arg	Ile	Phe	Lys	Arg	His	Gly	Ala
			35					40					45		
Val	Gln	Leu	Cys	Thr	Pro	Leu	Leu	Leu	Pro	Arg	Asn	Arg	Gln	Ile	Tyr
			50					55				60			
Glu	His	Asn	Glu	Ser	Ala	Leu	Phe	Met	Asp	His	Ser	Gly	Met	Leu	Val
								70				75			80
Met	Leu	Pro	Phe	Asp	Leu	Arg	Ile	Pro	Phe	Ala	Arg	Tyr	Val	Ala	Arg
			85					90						95	
Asn	Asn	Ile	Leu	Asn	Leu	Lys	Arg	Tyr	Cys	Ile	Glu	Arg	Val	Phe	Arg
			100					105					110		
Pro	Arg	Lys	Leu	Asp	Arg	Phe	His	Pro	Lys	Glu	Leu	Leu	Glu	Cys	Ala
			115					120					125		
Phe	Asp	Ile	Val	Thr	Ser	Thr	Thr	Asn	Ser	Phe	Leu	Pro	Thr	Ala	Glu
			130					135					140		
Ile	Ile	Tyr	Thr	Ile	Tyr	Glu	Ile	Ile	Gln	Glu	Phe	Pro	Ala	Leu	Gln
			145					150				155			160
Glu	Arg	Asn	Tyr	Ser	Ile	Tyr	Leu	Asn	His	Thr	Met	Leu	Leu	Lys	Ala
			165					170						175	
Ile	Leu	Leu	His	Cys	Gly	Ile	Pro	Glu	Asp	Lys	Leu	Ser	Gln	Val	Tyr

180 185 190
 Ile Ile Leu Tyr Asp Ala Val Thr Glu Lys Leu Thr Arg Arg Glu Val
 195 200 205
 Glu Ala Lys Phe Cys Asn Leu Ser Val Ser Ser Asn Ser Xaa Val Ser
 210 215 220
 Thr Leu Gln Xaa Leu Leu Asn Arg Arg Glu Ile Xaa Ala Arg Ser Tyr
 225 230 235 240
 Ala Asn Asn Xaa Asn Ser Leu Ile Lys Gln Lys Thr Gly Ile Ala Gln
 245 250 255
 Leu Val Lys Tyr Gly Leu Lys Asp Leu Glu Glu Val Val Gly Leu Leu
 260 265 270
 Lys Lys Leu Gly Ile Lys Leu Gln Val Leu Ile Asn Leu Gly Leu Val
 275 280 285
 Tyr Lys Val Gln Gln His Asn Gly Ile Ile Phe Gln Phe Val Ala Phe
 290 295 300
 Ile Lys Arg Arg Gln Arg Ala Val Pro Glu Ile Leu Ala Ala Gly Gly
 305 310 315 320
 Arg Tyr Asp Leu Leu Ile Pro Gln Phe Arg Gly Pro Gln Ala Leu Gly
 325 330 335
 Pro Val Pro Thr Ala Ile Gly Val Ser Ile Ala Ile Asp Lys Ile Ser
 340 345 350
 Ala Ala Val Leu Asn Met Glu Glu Ser Val Thr Ile Ser Ser Cys Asp
 355 360 365
 Leu Leu Val Val Ser Val Gly Gln Met Ser Met Ser Arg Ala Ile Asn
 370 375 380
 Leu Thr Gln Lys Leu Trp Thr Ala Gly Ile Thr Ala Glu Ile Met Tyr
 385 390 395 400
 Asp Trp Ser Gln Ser Gln Glu Glu Leu Gln Glu Tyr Cys Arg His His
 405 410 415
 Glu Ile Thr Tyr Val Ala Leu Val Ser Asp Lys Glu Gly Ser His Val
 420 425 430
 Lys Val Lys Ser Phe Glu Lys Glu Arg Gln Thr Glu Lys Arg Val Leu
 435 440 445
 Glu Thr Glu Leu Val Asp His Val Leu Gln Lys Leu Arg Thr Lys Val
 450 455 460
 Thr Asp Glu Arg Asn Gly Arg Glu Ala Ser Asp Asn Leu Ala Val Gln
 465 470 475 480
 Asn Leu Lys Gly Ser Phe Ser Asn Ala Ser Gly Leu Phe Glu Ile His
 485 490 495
 Gly Ala Thr Val Val Pro Ile Val Ser Val Leu Ala Pro Glu Lys Leu
 500 505 510
 Ser Ala Ser Thr Arg Arg Arg Tyr Glu Thr Gln Val Gln Thr Arg Leu
 515 520 525
 Gln Thr Ser Leu Ala Asn Leu His Gln Lys Ser Ser Glu Ile Glu Ile
 530 535 540
 Leu Ala Val Asp Leu Pro Lys Glu Thr Ile Leu Gln Phe Leu Ser Leu
 545 550 555 560
 Glu Trp Asp Ala Asp Glu Gln Ala Phe Asn Thr Thr Val Lys Gln Leu
 565 570 575
 Leu Ser Arg Leu Pro Lys Gln Arg Tyr Leu Lys Leu Val Cys Asp Glu
 580 585 590
 Ile Tyr Asn Ile Lys Val Glu Lys Lys Val Ser Val Leu Phe Leu Tyr
 595 600 605
 Ser Tyr Arg Asp Asp Tyr Tyr Arg Ile Leu Phe

610

615

<210> 5051

<211> 4125

<212> DNA

<213> Homo sapiens

<400> 5051

```

tttttttttc tattattctt ttactatttt ttctattacc attttttcta gtaccatttt
60
ttctattatt cttttactat aattgtatat aatatggcag ctgcttgcca catgtactat
120
gtggagagat gtaccaccct gcatcagctt ttaccctaca gaaggaaatc agcgttccat
180
tatattttat tgttatcaac agtttaggaa tacatagctt tgcttttgcc tttttctttc
240
cttccccctg tttccccctg cctcagagaa aagaaggaaa aaaaaattca tctttcctac
300
ccccctcttt ttggatgata ggacttgaag acaatctgaa ataccacata aactcacttc
360
cagatgtttt ttgtttcata tgcaattgaa ttgggctcag actgtgtttt taagctgtat
420
ggtaaaaata tcaactgtctt ctagggcctt attggggggc agggagagac gtgacacttt
480
gtcagaaggg attgagtctg ctaacttaaa ctttccttga ttcaggaata caaagtctcc
540
agctgtgaac agagactcat cagtgaata gagtacaggc tagaaaggtc tcctgtggat
600
gaatcagggtg atgaattcac gtatggagat gtgcctgtgg aaaacggaat ggcaccattc
660
tttgagatga agctgaaaca ttacaagatc tttgaggga tgccagtaac tttcacatgt
720
agagtggctg gaaatccaaa gccaaagatc tattggttta aagatgggaa gcagatctct
780
ccaaagagtg atcactacac cattcaaaga gatctcgatg ggacctgctc cctccatacc
840
acagcctcca ccctagatga tgatgggaat tatacaatta tggtgcaaa ccctcagggc
900
cgcatcagtt gtactggacg gctaattgta caggctgtca accaaagagg tcgaagtccc
960
cggctctccct caggecatcc tcatgtcaga aggcctcggt ctagatcaag ggacagtgga
1020
gacgaaaatg aaccaattca ggagcgattc ttcagacctc acttcttgca ggctcctgga
1080
gatctgactg ttcaagaagg aaaactctgc agaatggact gcaaagtcag tgggttacca
1140
acccagatc taagctggca actagatgga aagcccgtac gccctgacag tgctcacaag
1200
atgctggtgc gtgagaacgg ggtgcactct ctgatcatag agccagtcac gtcacgtgat
1260
gccggcatct acacatgtat agctaccaac cgagcaggac agaactcatt cagcctggag
1320
cttgtggttg ctgctaaaga agcacacaaa cccctgtgtt ttattgagaa gctccaaaac
1380

```

acaggagtgtg ctgatgggta cccagtgcgg ctggaatgtc gtgtattggg agtgccacca
1440
cctcagatat tttggaagaa agaaaatgaa tcaactactc acagcactga ccgagtgagc
1500
atgcaccagg acaaccacgg ctacatctgc ctgctcattc agggagccac aaaagaagat
1560
gctgggtggg atactgtgtc agccaagaat gaagcaggga ttgtgtcctg tactgccagg
1620
ctggacgttt acaccctgtg gcatcagcag tcacagagca ccaagccaaa aaaagtacgg
1680
ccctcagcca gtcgctatgc agcactttcg gaccagggac tagacatcaa agcagcgttc
1740
caacctgagg ccaaccctac tcacctgaca ctgaatactg ccttggtaga aagtgaggac
1800
ctgtaatcca gcattcttgt taaagctgaa acactgaaac agccattgcc ttgaccaaca
1860
tattcctttg tcacattatg taaaaggcag aaacatacct ttgactataa gaaattaaaa
1920
aaaaaaccca aaataatatt tttcttactt gatataccaa acttagttta agtagataat
1980
gctaatacaa atatacacat tgcacagaaa atacacattt actgtccaat ttaaaacttt
2040
ggaattgctg tgattaaagt gatcaaaatg ccaaaatact aaaggaaatc aattgttcac
2100
aggtaactac aatttgtatt atctacaagt gcctttaaac acaagatata ggtgctgtgt
2160
agcctgatag tgtgaaatgt ttaatgaggg agttgtacca caaacagtac tacaatgatt
2220
ctgaagcaca gtgtattcag acagatacag tgaaccaagt gcaatatgta aggatgaaag
2280
aagaagagat gacaaagaaa tccaagtaaa tgccttgtct ttgcaaatgt ttttatatta
2340
aatcataagg aaggaaactac ttgccttaaa tgttaatatc aaaagagttt tctaacaagg
2400
ttaatacctt agttcttaac attttttttc tttatgtgta gtgttttcat gctaccttgg
2460
taggaaactt atttacaaac catattaaaa ggctaattta aatataaata atataaagt
2520
ctctgaataa agcagaaata tattacagtt cattccacag aaagcatcca aaccacccaa
2580
atgaccaagg catatatagt atttgaggga atcaggggtt tggaaggagt agggaggaga
2640
atgaaggaaa atgcaaccag catgattata gtgtgttcat ttagataaaa gtagaaggca
2700
caggagaggt agcaaaggcc aggcctttct ttggttttct tcaaactag gtgaaaaaa
2760
cactgccatt cacaagtcaa ggaaccagg gccagctgga agtgtggagc acacatgctg
2820
tgagcacac atgctgtgga gattgcagtg tgtctgaggt ttgtgtagta gtggaagatt
2880
ttaggtatgt agagcaagtt gaaaatggat tgagactgca tgggtggcata aatgagaaat
2940
tgctgtagc atctagtcta cttgaaggaa gtggagacat aaggagagac aaaaacaggt
3000

ttgtgccata aagtattttt tcaaagacac caagatgtgg taaatgaaaa ttattagttc
 3060
 acttccctgc tgccatgaaa ctttgcctta agaaggtgct ggattccaag gtttgtaaag
 3120
 gcatctcggg aaagactgct ttttgaatgc atatgatttt gcatcagcta gactgagttg
 3180
 attctgacca gacttgatgg ttttaagtcg gaaccgataa attttaaaaa ggagaaaaaa
 3240
 taatttgacc tagtagtata aaacatgagg ctttaatggg actttgctat gaaaagaaaa
 3300
 cactgtattc cttatgcaaa acacatgtat ctttcattat ttataagtgg cctctcttag
 3360
 ctcagttact caattcatac gtagtatttt ttaaaataat tttatatctg tgtaccaccc
 3420
 catatatttc atattactgt ttcacatgta cagctttcta cttctttgta agaacaccaa
 3480
 ccaaccaagg ttaagtgat taataggctt gagcaccggg tggcagatgt tctatgcagt
 3540
 gtgggttcaag tttctttgac cgcacttata tgcattgcta atatggaatt taagatacca
 3600
 tacacagtct ctcatggacc tatctctatt gtagaattat gactttcggt gtcgaatgac
 3660
 cactgctgga tgtacctttt tttctgagct ctggtttgcc tttcttgact gtggccatca
 3720
 ccatgtcacc cacaccagca gcgggaagtc tgttcagccg tcccttgatc cccttcacgg
 3780
 agatgatata cagggttttg gtcctgtgtg tgtcagcaca attgattaca gtcctaccg
 3840
 gaagacccaa ggaaatccgg aatttcgcac cagaggaccc accacgtcct cgcttcgaca
 3900
 tcttgaacgc cggaaaaaag aaaaaaggta catccagcag tggtcattcg acaacgaaag
 3960
 tcataccgta gaaaagatgg cgtgtttctt tattttgaag ataatgcagg agtcatagtg
 4020
 aacaataaag gcgagatgaa aggttctgcc attacaggac cagtagcaaa ggagtgtgac
 4080
 gacttgtggc cccggattgc atccaatgct ggcagcattg catgc
 4125

<210> 5052

<211> 433

<212> PRT

<213> Homo sapiens

<400> 5052

Leu	Lys	Leu	Ser	Leu	Ile	Gln	Glu	Tyr	Lys	Val	Ser	Ser	Cys	Glu	Gln
1				5					10					15	
Arg	Leu	Ile	Ser	Glu	Ile	Glu	Tyr	Arg	Leu	Glu	Arg	Ser	Pro	Val	Asp
			20					25					30		
Glu	Ser	Gly	Asp	Glu	Phe	Thr	Tyr	Gly	Asp	Val	Pro	Val	Glu	Asn	Gly
		35					40				45				
Met	Ala	Pro	Phe	Phe	Glu	Met	Lys	Leu	Lys	His	Tyr	Lys	Ile	Phe	Glu
	50					55				60					
Gly	Met	Pro	Val	Thr	Phe	Thr	Cys	Arg	Val	Ala	Gly	Asn	Pro	Lys	Pro

```
<210> 5053
<211> 781
<212> DNA
<213> Homo sapiens

<400> 5053
```

ttcaactgca caaaggctgt attgcagggg aggtgggagg gggcaggcag aacgctcctc
 60
 ctccctgggtc ttggggcccc ggagcagagc ccagggatgg gctgagttag gggcttggca
 120
 ctctgtggaa gctgcagatg agagaccagc aatgcatcag ctgcacctgc agtagagcgc
 180
 ggagatagcg ttggaccatg tctaagatg tccccgctgc gcccgtgct gctggccctg
 240
 gcccttgccct ccgtgccttg cgcccagggc gcctgccccg cctccgccga cctcaagcac
 300
 tcggacggga cgcgcacttg cgccaagctc tatgacaaga gcgacccta ctatgagaac
 360
 tgetgcgggg gcgccgagct gtcgctggag tcgggcgcag acctgcccta cctgccctcc
 420
 aactgggcca acaccgcctc ctactttgtg gtggccccgc gctgcgagct caccgtgtgg
 480
 tcccggaag gcaaggcggg caagacgcac aagttctctg ccggcaccta cccgcgcctg
 540
 gaggagtacc gccggggcat cttaggagac tggccaacg ctatctccgc gctctactgc
 600
 aggtgcagct gatgcattgc tggctcttca tctgcagctt ccacagagt ccaagccct
 660
 cactcagccc atccctgggc tctgctccgg ggccccaga cccaggagga ggagcgttct
 720
 gcctgcccc tcccacctcc cctgcaatac agcctttgtg cagttgtaaa aaaaaaaaaa
 780
 a
 781

<210> 5054

<211> 156

<212> PRT

<213> Homo sapiens

<400> 5054

Glu	Thr	Ser	Asn	Ala	Ser	Ala	Ala	Pro	Ala	Val	Glu	Arg	Gly	Asp	Ser
1				5				10						15	
Val	Gly	Pro	Cys	Pro	Lys	Met	Ser	Pro	Leu	Arg	Pro	Leu	Leu	Leu	Ala
		20						25					30		
Leu	Ala	Leu	Ala	Ser	Val	Pro	Cys	Ala	Gln	Gly	Ala	Cys	Pro	Ala	Ser
		35						40					45		
Ala	Asp	Leu	Lys	His	Ser	Asp	Gly	Thr	Arg	Thr	Cys	Ala	Lys	Leu	Tyr
	50					55					60				
Asp	Lys	Ser	Asp	Pro	Tyr	Tyr	Glu	Asn	Cys	Cys	Gly	Gly	Ala	Glu	Leu
65				70					75					80	
Ser	Leu	Glu	Ser	Gly	Ala	Asp	Leu	Pro	Tyr	Leu	Pro	Ser	Asn	Trp	Ala
			85					90						95	
Asn	Thr	Ala	Ser	Ser	Leu	Val	Val	Ala	Pro	Arg	Cys	Glu	Leu	Thr	Val
		100						105					110		
Trp	Ser	Arg	Gln	Gly	Lys	Ala	Gly	Lys	Thr	His	Lys	Phe	Ser	Ala	Gly
		115					120					125			
Thr	Tyr	Pro	Arg	Leu	Glu	Glu	Tyr	Arg	Arg	Gly	Ile	Leu	Gly	Asp	Trp
	130					135					140				
Ser	Asn	Ala	Ile	Ser	Ala	Leu	Tyr	Cys	Arg	Cys	Ser				

145

150

155

<210> 5055

<211> 2520

<212> DNA

<213> Homo sapiens

<400> 5055

naggagcaag ccatgaaatt ggacacttgt tccaaaagcc aacctgtatg aacaatttct
60
gtaaaagcca aaaaattatg ctgaactttg gttaaaactt gaataaacta tttaatgatg
120
ctactgctta aattctaaat aagtactttt gttttttctc tctaactctc tcccatcccc
180
tcctctcttt ctcttaaagg catggagagt agaaaactga tttctgctac agacattcag
240
tactctggca gtctgctgaa ctcttgaat gagcaacgtg gccatggact cttctgtgat
300
gttaccgtta ttgtggaaga ccgaaaattc cgggctcaca agaataattct ttcagcttct
360
agtacctact tccatcagct cttctctgtt gctgggcaag ttgttgaact gagctttata
420
agagcagaga tctttgcaga aattctcaat tatatctata gttctaaaat tgttcgtgtt
480
agatcagatt tgcttgatga gttaattaaa tcagggcagt tattaggagt gaaatttata
540
gcagagcttg gtgtccatt gtcacagggt aaaagcatct caggtagcgc gcaggatggt
600
aatactgagc ctttacctcc tgattctggt gacaagaacc ttgtaataca gaaatcaaaa
660
gatgaagccc aagataatgg ggctactata atgcctatta taacagagtc tttttcatta
720
tctgccgaag attatgaaat gaaaaagatc attgttaccg attctgatga tgatgatgat
780
gatgtcattt tttgctccga gattctgccc acaaaggaga ctttgccgag taataacaca
840
gtggcacagg tccaatctaa cccaggccct gttgctatct cagatgttgc acctagtgtc
900
agcaataact cgcccccttt aacaaatctc acacctactc agaaacttcc tactcctgtg
960
aatcaggcaa ctttgagcca aacacaagga agtgaaaaat tgttggtatc ttcagctcca
1020
acacatctga ctcccaatat tattttgta aatcagacac cactttctac accaccaa
1080
gtcagttctt cacttccaaa tcatatgccc tcttcaatca atttacttgt gcagaatcag
1140
cagacaccaa acagtgtat tttaacagga aacaaggcca atgaagagga ggaggaggaa
1200
ataatagatg atgatgatga cactattagc tccagtctg actcgccgt cagtaataca
1260
tctttggtcc cacaggctga tacctcccaa aataccagtt ttgatggatc attaatacag
1320
aagatgcaga ttctacact tcttcaagaa ccactttcca attccttaaa aatttcagat
1380

ataattacta gaaatactaa tgatccaggc gtaggatcaa aacatctaata ggaggggtcag
 1440
 aagatcatta ctttagatac agctactgaa attgaaggct tatcgactgg ttgcaagggt
 1500
 tatgcaaata tcggtgaaga tacttatgat atagtgatcc ctgtcaaaga tgaccctgat
 1560
 gaaggggagg ccagacttga gaatgaaata ccaaaaacgt ctggcagcga gatggcaaac
 1620
 aaacgtatga aagtaaaaca tgatgatcac tatgagttaa tagtagatgg aagggtctat
 1680
 tatatctgta ttgtatgcaa aaggatcatat gtctgtctga caagcttgcg gagacatttt
 1740
 aacattcatt cttgggagaa gaagtatccg tgccgttact gtgagaagggt atttcctctt
 1800
 gcagaatatc gcacaaagca tgaaattcat cacacagggg agcgaaggta tcagtgtttg
 1860
 gcctgtggca aatctttcat caactatcag tttatgtctt cacatataaa gtcagttcat
 1920
 agtcaagatc cttctgggga ctcaaagctt tatcgtttac atccatgcag gtctttacaa
 1980
 atcagacaat atgcatatca ttccgataga tcaagcacta ttcttgcaat gaaggatgat
 2040
 ggtattgggt ataagggtga cactggaaaa gaacctccag tagggaccac tacatctact
 2100
 cagaacaagc caatgacctg ggaagatatt tttattcagc aggaaaatga ttcaattttt
 2160
 aaacaaaatg taacagatgg cagtactgag tttgaattta taataaccaga gtcttactaa
 2220
 actcctttga aataactagaa agttttgttt tggatgatgg ggcaggggtt tcagaagatc
 2280
 tgtaaaacaa attaagggtgc gaacaagtta atttgatctg ccacattatc tgaaggaagt
 2340
 gtagtgggat ttttgttgat aatttttaga agcaaatttt cctgaaagtt ttgagtagag
 2400
 gtgagacccc ctcccaagt atctgtttat atagttagtt ttcagctcat ttaaaagagg
 2460
 caaaaattaa aagcttgagg agatagtttc ctgaatagaa tttgaagcag tctgaatgtt
 2520

<210> 5056

<211> 672

<212> PRT

<213> Homo sapiens

<400> 5056

Met	Glu	Ser	Arg	Lys	Leu	Ile	Ser	Ala	Thr	Asp	Ile	Gln	Tyr	Ser	Gly
1				5					10					15	
Ser	Leu	Leu	Asn	Ser	Leu	Asn	Glu	Gln	Arg	Gly	His	Gly	Leu	Phe	Cys
			20					25					30		
Asp	Val	Thr	Val	Ile	Val	Glu	Asp	Arg	Lys	Phe	Arg	Ala	His	Lys	Asn
			35				40					45			
Ile	Leu	Ser	Ala	Ser	Ser	Thr	Tyr	Phe	His	Gln	Leu	Phe	Ser	Val	Ala
			50				55				60				
Gly	Gln	Val	Val	Glu	Leu	Ser	Phe	Ile	Arg	Ala	Glu	Ile	Phe	Ala	Glu

65 70 75 80
 Ile Leu Asn Tyr Ile Tyr Ser Ser Lys Ile Val Arg Val Arg Ser Asp
 85 90 95
 Leu Leu Asp Glu Leu Ile Lys Ser Gly Gln Leu Leu Gly Val Lys Phe
 100 105 110
 Ile Ala Glu Leu Gly Val Pro Leu Ser Gln Val Lys Ser Ile Ser Gly
 115 120 125
 Thr Ala Gln Asp Gly Asn Thr Glu Pro Leu Pro Pro Asp Ser Gly Asp
 130 135 140
 Lys Asn Leu Val Ile Gln Lys Ser Lys Asp Glu Ala Gln Asp Asn Gly
 145 150 155 160
 Ala Thr Ile Met Pro Ile Ile Thr Glu Ser Phe Ser Leu Ser Ala Glu
 165 170 175
 Asp Tyr Glu Met Lys Lys Ile Ile Val Thr Asp Ser Asp Asp Asp
 180 185 190
 Asp Asp Val Ile Phe Cys Ser Glu Ile Leu Pro Thr Lys Glu Thr Leu
 195 200 205
 Pro Ser Asn Asn Thr Val Ala Gln Val Gln Ser Asn Pro Gly Pro Val
 210 215 220
 Ala Ile Ser Asp Val Ala Pro Ser Ala Ser Asn Asn Ser Pro Pro Leu
 225 230 235 240
 Thr Asn Ile Thr Pro Thr Gln Lys Leu Pro Thr Pro Val Asn Gln Ala
 245 250 255
 Thr Leu Ser Gln Thr Gln Gly Ser Glu Lys Leu Leu Val Ser Ser Ala
 260 265 270
 Pro Thr His Leu Thr Pro Asn Ile Ile Leu Leu Asn Gln Thr Pro Leu
 275 280 285
 Ser Thr Pro Pro Asn Val Ser Ser Ser Leu Pro Asn His Met Pro Ser
 290 295 300
 Ser Ile Asn Leu Leu Val Gln Asn Gln Gln Thr Pro Asn Ser Ala Ile
 305 310 315 320
 Leu Thr Gly Asn Lys Ala Asn Glu Glu Glu Glu Glu Ile Ile Asp
 325 330 335
 Asp Asp Asp Asp Thr Ile Ser Ser Ser Pro Asp Ser Ala Val Ser Asn
 340 345 350
 Thr Ser Leu Val Pro Gln Ala Asp Thr Ser Gln Asn Thr Ser Phe Asp
 355 360 365
 Gly Ser Leu Ile Gln Lys Met Gln Ile Pro Thr Leu Leu Gln Glu Pro
 370 375 380
 Leu Ser Asn Ser Leu Lys Ile Ser Asp Ile Ile Thr Arg Asn Thr Asn
 385 390 395 400
 Asp Pro Gly Val Gly Ser Lys His Leu Met Glu Gly Gln Lys Ile Ile
 405 410 415
 Thr Leu Asp Thr Ala Thr Glu Ile Glu Gly Leu Ser Thr Gly Cys Lys
 420 425 430
 Val Tyr Ala Asn Ile Gly Glu Asp Thr Tyr Asp Ile Val Ile Pro Val
 435 440 445
 Lys Asp Asp Pro Asp Glu Gly Glu Ala Arg Leu Glu Asn Glu Ile Pro
 450 455 460
 Lys Thr Ser Gly Ser Glu Met Ala Asn Lys Arg Met Lys Val Lys His
 465 470 475 480
 Asp Asp His Tyr Glu Leu Ile Val Asp Gly Arg Val Tyr Tyr Ile Cys
 485 490 495
 Ile Val Cys Lys Arg Ser Tyr Val Cys Leu Thr Ser Leu Arg Arg His

	500		505		510										
Phe	Asn	Ile	His	Ser	Trp	Glu	Lys	Lys	Tyr	Pro	Cys	Arg	Tyr	Cys	Glu
	515						520					525			
Lys	Val	Phe	Pro	Leu	Ala	Glu	Tyr	Arg	Thr	Lys	His	Glu	Ile	His	His
	530						535					540			
Thr	Gly	Glu	Arg	Arg	Tyr	Gln	Cys	Leu	Ala	Cys	Gly	Lys	Ser	Phe	Ile
545					550					555					560
Asn	Tyr	Gln	Phe	Met	Ser	Ser	His	Ile	Lys	Ser	Val	His	Ser	Gln	Asp
			565						570					575	
Pro	Ser	Gly	Asp	Ser	Lys	Leu	Tyr	Arg	Leu	His	Pro	Cys	Arg	Ser	Leu
		580						585					590		
Gln	Ile	Arg	Gln	Tyr	Ala	Tyr	His	Ser	Asp	Arg	Ser	Ser	Thr	Ile	Pro
	595						600					605			
Ala	Met	Lys	Asp	Asp	Gly	Ile	Gly	Tyr	Lys	Val	Asp	Thr	Gly	Lys	Glu
	610					615					620				
Pro	Pro	Val	Gly	Thr	Thr	Thr	Ser	Thr	Gln	Asn	Lys	Pro	Met	Thr	Trp
625					630					635					640
Glu	Asp	Ile	Phe	Ile	Gln	Gln	Glu	Asn	Asp	Ser	Ile	Phe	Lys	Gln	Asn
			645					650						655	
Val	Thr	Asp	Gly	Ser	Thr	Glu	Phe	Glu	Phe	Ile	Ile	Pro	Glu	Ser	Tyr
		660						665					670		

<210> 5057

<211> 673

<212> DNA

<213> Homo sapiens

<400> 5057

nnggcggcgc agctattgct ggacggccag tgggagagcg aggcctgagc ctctgcgtct
60
aggatcaaaa tggtttcaat cccagaatac tatgaaggca agaacgtcct cctcacagga
120
gctaccgggt ttctagggaa ggtgcttctg gaaaagttgc tgaggtcttg tcttaagggtg
180
aattcagtat atgttttggg gaggcagaaa gctggacaga caccacaaga gcgagtggaa
240
gaagtcctta gtggcaagct ttttgacaga ttgagagatg aaaatccaga ttttagagag
300
aaaattatag caatcaacag cgaactcacc caacctaaac tggctctcag tgaagaagat
360
aaagagggtga tcatagattc taccaatatt atattccact gtgcagctac agtaagggtt
420
aatgaaaatt taaggtaagt acaagtaatt atataatatt tgaacttcag tatagttatt
480
aaaaaatctc attttaattc tacttttttag tcaatttggt ttgaatgtga tttgatacta
540
tttgctctatg ttaactgtgg ctttcagtgt cctacagagt gttaaaagaa ttctcttctt
600
cttctcagtt taaaaatctt ggataactaa tacatgttta ttggaagaag ttgccatgaa
660
tttaaacatg cat
673

<210> 5058

<211> 122
 <212> PRT
 <213> Homo sapiens

<400> 5058
 Met Val Ser Ile Pro Glu Tyr Tyr Glu Gly Lys Asn Val Leu Leu Thr
 1 5 10 15
 Gly Ala Thr Gly Phe Leu Gly Lys Val Leu Leu Glu Lys Leu Leu Arg
 20 25 30
 Ser Cys Pro Lys Val Asn Ser Val Tyr Val Leu Val Arg Gln Lys Ala
 35 40 45
 Gly Gln Thr Pro Gln Glu Arg Val Glu Glu Val Leu Ser Gly Lys Leu
 50 55 60
 Phe Asp Arg Leu Arg Asp Glu Asn Pro Asp Phe Arg Glu Lys Ile Ile
 65 70 75 80
 Ala Ile Asn Ser Glu Leu Thr Gln Pro Lys Leu Ala Leu Ser Glu Glu
 85 90 95
 Asp Lys Glu Val Ile Ile Asp Ser Thr Asn Ile Ile Phe His Cys Ala
 100 105 110
 Ala Thr Val Arg Phe Asn Glu Asn Leu Arg
 115 120

<210> 5059
 <211> 480
 <212> DNA
 <213> Homo sapiens

<400> 5059
 ctcgagaact gaaagacact ctctatgggt taagccaccc agtgcattgt atcttgttat
 60
 aactgcccga gctgactgag acggacgttc aggacagaga gcgtgaatgc atagtgcac
 120
 cagctgtgag tctttctcca gggacagtcg gcagccggcc ctagggtgcag agccgatgac
 180
 aaggaccag gctctcagca ggtcttccaa gcagtgtggt agaaaggcag gcagggtgtg
 240
 gggaagtga gccaggccac cagtcattgat gtcaagactg agccaggaag caaaggcagg
 300
 cagagagatg gggaggagag ggagcaggag gggactggcc atctctgaga cagaagcgtg
 360
 agtagtgggt ggacttgagg gcaggagagg actgaaaggg cagaggcctg ggcgatgcag
 420
 ccagagagg agatgctggt gtggggagggt ctgggcaggg atgttttagg tgatggcaga
 480

<210> 5060
 <211> 114
 <212> PRT
 <213> Homo sapiens

<400> 5060
 Met Ala Ser Pro Leu Leu Leu Pro Leu Leu Pro Ile Ser Leu Pro Ala
 1 5 10 15
 Phe Ala Ser Trp Leu Ser Leu Asp Ile Met Thr Gly Gly Leu Ala Pro

[illegible]

```
<210> 5061
<211> 2462
<212> DNA
<213> Homo sapiens
```

```

<400> 5061
gcggccgcga attttttttt tttttttttt ttttttttaa aaaggcccaa aactttattt
60
agtttttcagg gaaatataag atgcatgtaa acataaaata caaaacaaaa cccaaatctt
120
acagtctaga agcatgccaa gacagagcat tttctgcaga ccaaagagtc ccgtaaagt
180
gataaaggac acctggaaag tggcaggcca aggggctggg cccttcccca agggcactgc
240
atttttgtga tgagattaaa aacaaaccaa ctccactatt aaaaatgcta gaaacatgga
300
gatagtttag caccaccatt gattctggaa atatttcagc actcaaatcg actgcactga
360
gtttaatgtc ctttctccag tttctctgct gaggaggaaa gaaggaaaac ctggagggaag
420
ggctcctcct gaccccacag agcccactaa gagctgggag gggaattcca tgaggaattc
480
tccaagggtt tggagctcca gagacatcca ccagtcacca ccagccatg cagtccacat
540
gctcacgctt cagggattac tgaagtctgc cttgcccggt agtcacttcc tgcagacctc
600
tgagtacctg gtggggaaac ccatttccca tcctgtgtct tggatttaaa gaaaacctgt
660
tggagataat gagttgtaaa ttcaaggagg gtggctgttt tgctgttctt tctctgcagt
720
aaactcttat ggggagtggt ccttggttat aaggcaacgc aaaatggtag ggtatatcca
780
tggatgaatg ttcatcacac ccaatctaatt tcataccagg tggcagggtc agcaaaactga
840
accaccacag gtgtcagaga tacttgagaa tgactggtac caacaagacg acaaaggagg
900
ttgccttctt cccagatgtg cccaatggag tctgaactct ggttctaatt tgtggagggtg
960
ggctccctact gtatgacca ttgtgggtcac tgctctttga gccatacaac ttgagagact
1020

```

ggctttggat tggacagtca aagggaagtg ggcaaaacca gctgagaacc cgggagctgg
1080
atgcatatat tctggaatca gggcctgcaa actcaaagat tggtttgtgg ctggtgactt
1140
ctctctgcta agtaaatcaa tgaccattca ttgagaactg atggggaccc agcgtgtggc
1200
ccaatgagtg gcagtttttt cctagccagc ttctgtggcc aaatttggag gattttccaa
1260
cctgctatgg ctggaccctt ggggtgttaa tcaactaaatt ccctttctac ctgctctctt
1320
cttctgaaa cactcagagc tgacttcttc cttctttcta atcaacaaag acaaaactcc
1380
aagccctttt tcagccttca cacaattttt cttcttagaa gacatccgct tctggaagcc
1440
tccttcccta atgaaggac agtaggcccc agctacccca aacatgcaca tgctcttctc
1500
accaacgtgc ctctcacttg cctctaactg gctcgagcca tccttttgtt ctaaataatt
1560
cttctccct ccctcccttt tttctcttc acctcttgag ggcgcagcta ttggccagga
1620
tggaactggg agcaaggcgg ggaccttcag tgcaggggac ccattctct aaggccactg
1680
agttctagga ctggagtagg agaggggtgct gttgtcaagg ttaagtcaa acttgagatt
1740
ttaaaaagac aggattgggg aagggggatt gcatgcta atcccaacctta taggcaggct
1800
gggatcaaga ctttgaagg tagggctctc caccagctct gtaagcacca gtgtgcccc
1860
cttatggcct ggggacccag gtttgcagga gggaagttaa cagtggggct gtttttcccc
1920
aaagctgtgg gtcactgac ctgtcttctc actggctctg atcatgcagc ttgggaacca
1980
cagagacatg agactgcacc aaacagggct gatgatttag ccagaaactc aggaaggctt
2040
agcacagccc tccacacact tcccaggaag tgtttggctt gccctgcag ttgggactaa
2100
acttatatgc acctgcaggt cttgttgggt gcaccgtgag caagttctca ccccaaccac
2160
ctgacccacc ctctgaaaca aggacgaaag ggctggcagc tttcattata aggggcttct
2220
catacccatg gcatggctga ggggtgggag tcagcctgct cgatgacacg tctgcagggg
2280
atgacctaac tgaaccaact cagtgtttct attcccagtg gcattctttt tgcacatctt
2340
cattttggag cctgggatga ctgcctagga cacttatgct agacctgtta atgccagtg
2400
gaaatttcca actaaatact taataaaata attacaaaaa gaaaaaaaaa tgacacattg
2460
ca
2462

<210> 5062

<211> 136

<212> PRT

<213> Homo sapiens

<400> 5062

```

Met Ala Gly Trp Gly Leu Val Asp Val Ser Gly Ala Pro Glu Pro Trp
 1           5           10           15
Arg Ile Pro His Gly Ile Pro Leu Pro Ala Leu Ser Gly Leu Cys Gly
          20           25           30
Val Arg Arg Ser Pro Ser Ser Arg Phe Ser Phe Phe Pro Pro Gln Gln
          35           40           45
Arg Asn Trp Arg Lys Asp Ile Lys Leu Ser Ala Val Asp Leu Ser Ala
          50           55           60
Glu Ile Phe Pro Glu Ser Met Val Val Leu Asn Tyr Leu His Val Ser
65           70           75           80
Ser Ile Phe Asn Ser Gly Val Gly Leu Phe Leu Ile Ser Ser Gln Lys
          85           90           95
Cys Ser Ala Leu Gly Glu Gly Thr Ser Pro Leu Ala Cys His Phe Pro
          100          105          110
Gly Val Leu Tyr His Phe Asp Gly Thr Leu Trp Ser Ala Glu Asn Ala
          115          120          125
Leu Ser Trp His Ala Ser Arg Leu
          130          135

```

<210> 5063

<211> 561

<212> DNA

<213> Homo sapiens

<400> 5063

```

gacgcaaccc cagtgtcaaa ccagggggta agtcaaggta tccggccagg cgccggcagc
60
tgagggggcc cagtggggtc tcgtctgtgg cccagagacg tggcggaaga aggcagtaca
120
tctcccttct tagagagaga gtggaagctt ctgagtgtgg cttgggtcgt tctgaaccat
180
ggtgacgttt ccaccctgcc actgcctgtc ttccagtttg acttgctgga aatggaccgg
240
ctggagaggc cactggttga cctgccgtc ctcctggacc cgcctccta cgtgcccgac
300
acggtggacc tcaccgatga cgctctggcc cgaaaatact ggctcacctg ctttgaggag
360
gccctggacg gggtagtgaa gcgcgcagtg gcgagccagc cagactctgt ggatgcagcc
420
gagagggcgg agaagttccg gcagaagtac tggaacaagc ttcagaccct gaggcagcag
480
cccttcgcct atgggaccct gaccgtgcgc agcctgctgg acaccaggga gcactgtctg
540
aacgagttca acttcccgga t
561

```

<210> 5064

<211> 110

<212> PRT

<213> Homo sapiens

<400> 5064

```

Met Asp Arg Leu Glu Arg Pro Leu Val Asp Leu Pro Leu Leu Leu Asp
 1           5           10           15
Pro Pro Ser Tyr Val Pro Asp Thr Val Asp Leu Thr Asp Asp Ala Leu
 20           25           30
Ala Arg Lys Tyr Trp Leu Thr Cys Phe Glu Glu Ala Leu Asp Gly Val
 35           40           45
Val Lys Arg Ala Val Ala Ser Gln Pro Asp Ser Val Asp Ala Ala Glu
 50           55           60
Arg Ala Glu Lys Phe Arg Gln Lys Tyr Trp Asn Lys Leu Gln Thr Leu
 65           70           75           80
Arg Gln Gln Pro Phe Ala Tyr Gly Thr Leu Thr Val Arg Ser Leu Leu
 85           90           95
Asp Thr Arg Glu His Cys Leu Asn Glu Phe Asn Phe Pro Asp
 100           105           110

```

<210> 5065

<211> 370

<212> DNA

<213> Homo sapiens

<400> 5065

```

attgaggacg cgcgaggagcg aatgaggacg ctgcggaagc tgatccggga tctcccagga
60
cactactatg aaacgctcaa attccttggtg ggccatctca agaccatcgc tgaccactct
120
gagaaaaaca agatggaacc ccggaacctg gccctggtct ttgggccgac actggtgagg
180
acgtctgagg acaacatgac agacatggtg acccacatgc ctgaccgcta caagatcgtg
240
gagacactga tccagcactc agactgggtc ttcaagtgcg aagaggacaa gggagagaga
300
attctaccac ctgtagttca gtcaagtcca agggttcgtg ggcccccaag aaggagccgt
360
acgcccgggc
370

```

<210> 5066

<211> 123

<212> PRT

<213> Homo sapiens

<400> 5066

```

Ile Glu Asp Ala Arg Glu Arg Met Arg Thr Leu Arg Lys Leu Ile Arg
 1           5           10           15
Asp Leu Pro Gly His Tyr Tyr Glu Thr Leu Lys Phe Leu Val Gly His
 20           25           30
Leu Lys Thr Ile Ala Asp His Ser Glu Lys Asn Lys Met Glu Pro Arg
 35           40           45
Asn Leu Ala Leu Val Phe Gly Pro Thr Leu Val Arg Thr Ser Glu Asp
 50           55           60
Asn Met Thr Asp Met Val Thr His Met Pro Asp Arg Tyr Lys Ile Val
 65           70           75           80
Glu Thr Leu Ile Gln His Ser Asp Trp Phe Phe Ser Asp Glu Glu Asp

```

	85		90		95										
Lys	Gly	Glu	Arg	Ile	Leu	Pro	Pro	Val	Val	Gln	Ser	Ser	Pro	Arg	Val
	100						105						110		
Arg	Gly	Pro	Pro	Arg	Arg	Ser	Arg	Thr	Pro	Gly					
	115						120								

<210> 5067

<211> 2023

<212> DNA

<213> Homo sapiens

<400> 5067

gctgaggcac aacatgatcg agagcttcgg nagcttgaac agagggtctc cctccggagg
 60
 gactcttag aacaaaagat tgaagaagag atgttggtt tgcagaatga gcgcacagaa
 120
 cgaatacgaa gcctgttgga acgtcaagcc agagagattg aagcttttga ctctgaaagc
 180
 atgagactag gttttagtaa tatggctcct tctaattctt cccctgaggc attcagccac
 240
 agctaccgag gagcttctgg ttggtcacac aaccctactg ggggtccagg acctcactgg
 300
 ggtcatccca tgggtggccc accacaagct tggggccatc caatgcaagg tggacccag
 360
 ccatggggtc acccttcagg gccaatgcaa ggggtacctc gaggtagcag tatgggagtc
 420
 cgcaatagcc cccaggctct gaggcggaca gcttctgggg gacggacaga gcagggcatg
 480
 agcagaagca cgagtgtcac ttcacaaata tccaatgggt cacacatgtc ttatacataa
 540
 cttataaatt gagagtggca attccgctgg agctgtctgc caaaagaaac tgcctacaga
 600
 catcatcaca gcagcctcct cacttgggta ctacagtgtg gaagctgagt gcatatggta
 660
 tattttattc atttttgtaa agcgttctgt tttgggttta ctaattggga tgtcatagta
 720
 cttggctgcc gggtttggtt gtttttgggg aaattttgaa aagtggagtt gatattaaaa
 780
 ataaatgtgt atgtgtgtac atatataac acacacatac acatatatta tgcagtgggt
 840
 gaaaagaatt ggctagatag gggatttttc tgaacactgc aaaaatagaa cgtagcaaaa
 900
 tggcttcagt taccactttt ggggtgtctg atcctaagaa gtttctgaaa agatctaaag
 960
 cctttttatc ccatatccca aattcttatg agccactcac agcaggcagc atatgttgaa
 1020
 ataagttatt actggtacac acctgcattg cctcaccagt gtattttatt gttattaaat
 1080
 tgatctgact tctcagcctc atttggacta aaaaaagaaa gcagaaatcc atgaacacat
 1140
 tgcttctcgg ccttttggct aagatcaagt gtagaaatcc atgaacacta aaggacttca
 1200
 ttgatttttt cagagagtag aaaacaactt agtttttctt ttttcctgaa tgcgtcatag
 1260

gcttgtagt gatttttgtc cattcaattg tgccttcttt gtattatgat aagatggggg
 1320
 tacttaagga gatcacaagt tgtgtgagga ttgcattaac aaacctatga gccttcaatg
 1380
 gggaagacca gaagggtag agggggcctg aaagttcata tggtaggtat gtcccgcagc
 1440
 agagttagga gatgaagctt acgtgtcctg acgttttggt gcttatactg tgatatctca
 1500
 tcctagctaa gctctataat gcccaagacc ccaaacagta cttttacttt gtttgtacaa
 1560
 aaacaaagac atatagccaa tacaaatcaa atgccggagg tgtttgatgc catatttgca
 1620
 aattgccatc tattgaaatt ctggtcacac tacatagaca taattgttat ctccttttgg
 1680
 cttatgtgat tttctgttta caagtagaat agccaattat ttaaattgtt agttgccaca
 1740
 gtgaaccagg agtcactgag ccaatgactt taccagctgc tgactaatct tcatcaccac
 1800
 tgtagatttt gctgcatgtg caggtcctct atttttaatt gctgttttcg ttgctgcagt
 1860
 actttacaaa cttctagtgc gttgagactt agtgaccatt tggcatcaag ttaacatcac
 1920
 acaataggaa acaccacttc cacaagtctc aagcctcagt gctaaagtac tactgaaaag
 1980
 gaactaggaa gtttggtccaa ttaaaaaaaaa aaaaaagtcg acc
 2023

<210> 5068

<211> 179

<212> PRT

<213> Homo sapiens

<400> 5068

Ala	Glu	Ala	Gln	His	Asp	Arg	Glu	Leu	Arg	Xaa	Leu	Glu	Gln	Arg	Val	15
1				5					10							
Ser	Leu	Arg	Arg	Ala	Leu	Leu	Glu	Gln	Lys	Ile	Glu	Glu	Glu	Met	Leu	30
			20					25								
Ala	Leu	Gln	Asn	Glu	Arg	Thr	Glu	Arg	Ile	Arg	Ser	Leu	Leu	Glu	Arg	45
			35				40									
Gln	Ala	Arg	Glu	Ile	Glu	Ala	Phe	Asp	Ser	Glu	Ser	Met	Arg	Leu	Gly	60
			50			55					60					
Phe	Ser	Asn	Met	Val	Leu	Ser	Asn	Leu	Ser	Pro	Glu	Ala	Phe	Ser	His	80
				70					75							
65	Ser	Tyr	Pro	Gly	Ala	Ser	Gly	Trp	Ser	His	Asn	Pro	Thr	Gly	Gly	95
				85					90							
Gly	Pro	His	Trp	Gly	His	Pro	Met	Gly	Gly	Pro	Pro	Gln	Ala	Trp	Gly	110
				100				105								
His	Pro	Met	Gln	Gly	Gly	Pro	Gln	Pro	Trp	Gly	His	Pro	Ser	Gly	Pro	125
			115				120									
Met	Gln	Gly	Val	Pro	Arg	Gly	Ser	Ser	Met	Gly	Val	Arg	Asn	Ser	Pro	140
						135					140					
Gln	Ala	Leu	Arg	Arg	Thr	Ala	Ser	Gly	Gly	Arg	Thr	Glu	Gln	Gly	Met	160
				150						155						
145	Ser	Arg	Ser	Thr	Ser	Val	Thr	Ser	Gln	Ile	Ser	Asn	Gly	Ser	His	Met

Ser Tyr Thr 165 170 175

<210> 5069
<211> 3655
<212> DNA
<213> Homo sapiens

<400> 5069
nttttttttt tttttttttt tttggaagtc ctgagttgag gcttgcgagg tcctttccgg
60
agaaagcgca ggctaaagcc gcagggtgaag atgtccaact acgcgaacga catgtggccg
120
ggctcgccgc aggagaagga ttccgacctc acctcgcggt cgggcggggtc cagccggctg
180
tcgtcgcggt ctaggagccg ctcttttttc agaagctctc ggtcccatc cgcgtctcg
240
agccggtttt cgtccaggag tcggaggagc aagtcagggt cccgttcccg aaggcgccac
300
cagcgggaagt acaggcgcta ctcgcggtca tactcgcgga gccggtcgcg atcccgcagc
360
cgccggttacc gagagaggcg ctacgggttc accaggagat actaccggtc tccttcgagg
420
taccggtccc ggtcccgtag caggtcgcgc tctcggggaa ggtcgtagt cggaaggggc
480
tacgcatcg cgcggggaca gcgctactac ggctttggtc gcacagtgt cccggaggag
540
cacagcagat ggaggggacag atccaggagc aggtcgcgga gcagaacccc ctttcgctta
600
agtgaaaaag gtgggtgggt catttacctt tccatttgtg gtaatgtatg gtggcagtat
660
atgagtaggc tagggaacca acgttgctgt gtagtttcaa tattagttcc tttagtgccc
720
gaaatctttt tggaggaaag agggaggaca ttacctgtat ttaagtggac agcattctct
780
ttaggggttaa aggtcaactg gaagttaaat ggctcaggat gtagggaact ttttttccta
840
ttggctgact gttcttagtg ggtggagcct tttaaatgtt atgattaagt taaaggttct
900
aagttaacgt gattgggaag aacaatatca aaacacgcct tcttttagtt gacattatta
960
ctgaataaaa ttggattgtc gagtatccta agtgacctag gaggccgggc gcggcggtc
1020
acctctgtaa tcccagcact tggggaggcg gaggcgagg cgggtgggtc acttgaggcc
1080
aggcgttcca caccagccag gccaacatag ctactatct agtaaaagta caaaaattag
1140
ccgggggtgg cggtagaaat acactttagt agtgtatcag tattggttca gtggttgtga
1200
taattatata aagaatctac agcagaaaaa cctgggttttc agaaatacat ctttgaagag
1260
aaagcaaaat aatatcacta ttagctagag aaaattaagt acaacaaaaa gacaaaataa
1320

taggacgctc aggccttttag tcaagaaaac aaaactaatt gttgagataa tttagaatt
1380
ttattctttt cagcaagaaa tgagctggag aatagaattt tcagtgaata aagttacaca
1440
gttggtccctc tggtcactcg ggggtttggt gccaggatgc atatggaacc ctgcgcaca
1500
cttgggggttt acagtctctc aaacactgtg gtactttcta tctgcattta gtaaggggga
1560
gaaaaaaca gtataaagtg gaccagcgca gctactagtg ttcaagggca acctagtgtt
1620
acctattata aaacaagtga cttaatatat ttaataccac aaaataacat atttattgtg
1680
taattctgag ttctcttggg aaataactac cagattaatg agtatttta aatctctctc
1740
tttttttttt agatcgaatg gagctgttag aaatagcaaa aaccaatgca gcgaaagctc
1800
taggaacaac caacattgac ttgccagcta gtctcagaac tggtccttca gccaaagaaa
1860
caagccgtgg aataggtgta tcaagtaatg gtgcaaagcc tgaagtaagt attctaggtt
1920
tgtcggaaca aaactttcag aaagccaact gtcaaactcg attagccact tatatcttag
1980
actatacttt ttgggaagtc tagagatgta tataatgtgc taaattcaaa gtagcaaate
2040
tgaagatagg caatgtcaaa cccatgaaaa tgggagatta atgagcttta tttggccgtg
2100
catgggtgcct catgcctgta atgaggcaga tggcttgagt ccaggagttc aagactagcc
2160
tgggcaatgt ggcaaaaccg cgtgtttaca aaaaatacaa aaattagcca ggcatgggtg
2220
tgcattgcctg tagtcccagc tggttgggag gctgaggcag gaggatcttt gagcctagga
2280
tgctaagggtt gcagtgcgac aagatggcac cattgcactc tagcctgggc agcagagcga
2340
gaccctgtct caaaaaatac atttattttt ttcattttca gttacacagt tactcttata
2400
acaccgttat tagctggtac tttgggtgatt tctattacta gtttttctaa gctatttaca
2460
gagtgtttgt agctttcatt tgcagcatta tggtcccaaa aattctgtac tcagcatata
2520
cagtatagtt tatctgtctc atttctgtct tatagaaatc atgaatgtgg tctccagaca
2580
gtgatgaaga aaatctgttg gtaattgata catgggttca agtgtcagag gtttaatttg
2640
aagtttatgt tcacacactg aaaacttagt tttttgttg gtagatccat gtgcattgta
2700
gaatttggga caggcactat ttgcataaag tattaagtc aatttttaaa ctaagcaag
2760
gtacacgttg taacgggtggg gcatctgtga aaaagatgtc cttttcataa tatatgcaat
2820
atattccaga tgttttgaga gattacagaa gaggaggcct gcttcacttg cagataagtt
2880
tattataatt ctccagaaat gtgcaggatg tgcattagca aattgcactg tacttttcac
2940

tccagcctgg gtgacagagc aagactcccc tctcgggggc ttaaaaaaa aaaaatgctg
 3000
 tatctaaatg aatctgtgta attgggccca gatgtggggt tgctcagtat tagtagacaa
 3060
 ggtctttgtt cagacgatta ggtgcctaac tggcaaagtc cttagtttct taaaacgtat
 3120
 tttctgatgt ggctttacat ttcaaaagt aacttgattc aacctgagaa aactgattaa
 3180
 aaaattagtt taaatttgcc agcaggaag taaaataatt atgggaagag tgtcttaagc
 3240
 ctaatattaa atcagttttg ttaaggggaa aactcaatag ttctgttact taggctgtta
 3300
 gatccaagtt gatttttgtg tctacagcta aattttgttt acaattaggc tattttttaa
 3360
 tataggattt agaaaccaag ggtatgtgtt taaaattac acttttttctt aacctgtcta
 3420
 gctgtcggaa aaggttaacag aagatggaac tcgaaatccc aatggaaaac ctaccagca
 3480
 aagaagcata gcttttagct ctaataattc tgtagcaaag ccaatacaaa aatcagctaa
 3540
 agctgccaca gaagaggcat cttcaagatc accaaaaata gatcagaaaa aaagtccata
 3600
 tggactgtgg atacctatct aaaagaagaa aactgatggc taagtttgca tgaaa
 3655

<210> 5070

<211> 255

<212> PRT

<213> Homo sapiens

<400> 5070

Met	Ser	Asn	Tyr	Ala	Asn	Asp	Met	Trp	Pro	Gly	Ser	Pro	Gln	Glu	Lys
1				5					10					15	
Asp	Ser	Pro	Ser	Thr	Ser	Arg	Ser	Gly	Gly	Ser	Ser	Arg	Leu	Ser	Ser
			20					25					30		
Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Ser	Arg	Ser	His	Ser	Arg
			35				40					45			
Val	Ser	Ser	Arg	Phe	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Lys	Ser	Arg	Ser
			50				55				60				
Arg	Ser	Arg	Arg	Arg	His	Gln	Arg	Lys	Tyr	Arg	Arg	Tyr	Ser	Arg	Ser
65					70					75				80	
Tyr	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Tyr	Arg	Glu	Arg
			85					90						95	
Arg	Tyr	Gly	Phe	Thr	Arg	Arg	Tyr	Tyr	Arg	Ser	Pro	Ser	Arg	Tyr	Arg
			100					105					110		
Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Ser	Tyr	Cys	Gly
			115				120					125			
Arg	Ala	Tyr	Ala	Ile	Ala	Arg	Gly	Gln	Arg	Tyr	Tyr	Gly	Phe	Gly	Arg
			130				135					140			
Thr	Val	Tyr	Pro	Glu	Glu	His	Ser	Arg	Trp	Arg	Asp	Arg	Ser	Arg	Thr
145					150					155				160	
Arg	Ser	Arg	Ser	Arg	Thr	Pro	Phe	Arg	Leu	Ser	Glu	Lys	Gly	Gly	Trp
			165					170						175	
Val	Ile	Tyr	Leu	Ser	Ile	Cys	Gly	Asn	Val	Trp	Trp	Gln	Tyr	Met	Ser

```
<210> 5071
<211> 2196
<212> DNA
<213> Homo sapiens
```

4254

atagatttct catgcagcta gtgaggggac ttctctcttc acccatttcc accttctcct
 1200
 attttccttt ttttctcttc tgttgagatg gagtctcact ctgtcaccca ggctggagtg
 1260
 cagtgtcgcg accttggttc actgcaacct ccacctcca gggtcaagca attctccac
 1320
 ctcagcctcc aaagtagctg ggattacagg catgcgcaac catgcccagc taatttttgt
 1380
 aatttttagta gagatgggtt ttcgcttagt agagatgggt gtttgccagg ctgggtccga
 1440
 actcctgacc tcaggtgatc cgcccacctc ggctcccaa agtgctgggg ttacaggctt
 1500
 aagccacca gcccggccga ccttcttcta ttttccatt ctctttcca aagccatggc
 1560
 catgcgtcc tgtgtacagg tgcataaaca catcagtgtg ccatccctca catgcagtgc
 1620
 gttccccacc cctccttccc agggcttctc ttggctccag cgttctcttg ggacctctg
 1680
 cagatacagc ctgtgctgga cccccagcca gggtaggggc tcattctgct ctgtcttccc
 1740
 cactgcctca gtttccccca aaagctgctt tcacgtcctt ctagtagggg gcctcccatg
 1800
 ggggcaagga tccccttag gattcaatct ttctctttg ggcagttttg gctttgagtc
 1860
 cccagggat cagggtgaga atgaagaaga gctcagttag cggaatgaca gcagctgggt
 1920
 ggggtggtgtg gggagaggct gaggggaagg cagccccccc aggggggcct aaccgtggaa
 1980
 tcaatgcaat ttctctgtag atcccgaact ggacaaccag gacagggatt gaccattccc
 2040
 ttccattcc actcggactg tgtccaagcg ggggctgtcc actgcggggg ctgcctcccc
 2100
 atcgggtcct aacagctcta agactgggag tggagttcct ggaggtgtgg ggaggggggc
 2160
 gtgttttcaa tttagaaaaa tctcagccag ctcgag
 2196

<210> 5072

<211> 76

<212> PRT

<213> Homo sapiens

<400> 5072

Met	Glu	Ser	His	Ser	Val	Thr	Gln	Ala	Gly	Val	Gln	Cys	Arg	Asp	Leu
1				5					10					15	
Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Arg	Phe	Lys	Gln	Phe	Ser	His	Leu
			20					25					30		
Ser	Leu	Gln	Ser	Ser	Trp	Asp	Tyr	Arg	His	Ala	Gln	Pro	Cys	Pro	Ala
		35					40				45				
Asn	Phe	Cys	Asn	Phe	Ser	Arg	Asp	Gly	Phe	Ser	Leu	Ser	Arg	Asp	Gly
	50					55					60				
Cys	Leu	Pro	Gly	Trp	Ser	Arg	Thr	Pro	Asp	Leu	Arg				
65						70					75				

<210> 5073
<211> 1712
<212> DNA
<213> Homo sapiens

<400> 5073
ntgtggaagc agctttctgg tgagcaggtg agctggagca aggacttccc agctgtggac
60
tctgtgctgg tgaagctcct ggaagtgatg gaaggaatgg acaaggagac gtttgagttc
120
aagtttggga aggaactaac attcaccact gtactgagtg accaacaggt ggtggagctg
180
atccctgggg gtgcaggcat cgctgtggga tatggggacc gttctcgttt catccaactg
240
gtccagaagg cacggctaga ggagagcaag gagcaggtgg cagctatgca ggcaggtctg
300
ctgaaggtgg taccacaggc tgtgctggac ttgctgacct ggcaagagtt ggagaagaaa
360
gtgtgtgggg atccagaggt cactgtggat gctctgcgca agctcaccgg gtttgaggac
420
ttcgagccat ctgactcgcg ggtgcagtat ttctgggagg cactgaacaa cttcaccaac
480
gaggaccgga gccgcttcct gcgctttgtc acgggccgca gtcgcctgcc agcacgggna
540
tctacatcta cccagacaag ctgggctacg agaccancag acgcgctgcc cgagtcttcc
600
acttgctcca gcacctctt cctgccacac tatgccagtg ccaaggtatg cgaggagaa
660
ctccgctatg cggcctacaa ctgcgtggcc atcgacactg acatgagccc ttgggaggag
720
tgaggcgtgc cgccggctgt gggaccagca agactgcacg tgtccctctt ggccctgccc
780
agggcgaaga caccttccct gccctggttt ggctgacgtg ctcagcaaaa ccccatgtgc
840
cctgtcctg tgtgcagttg gggtaggggc agctggcatg gtcaggtaac actagtggcc
900
cagccccgca gaccacaag ccctaccctg gctggggctt gcttcccgag gtatttcacc
960
tcttaagagg gaatcttcca caagcccagc acaagctgcc aggcctgagc tacttgaagg
1020
gggcatcta ggtccccaac ccatggactt tgcctccatt ttcagctccg ccttttttct
1080
cctattttct ctctggcttt cttcagccat gactcacaac taaaaacata aaacactgga
1140
ggtagtgga gggccctccc caagcagga gacctgggatg ggcagggagt gatagccaaa
1200
ctccttggtc acctgctcca agaaggaagc agtagctgag cacctgccct cacatactgc
1260
tcttttcccc tctccctcca caccagagat gtggtgagct ctgttcttct accaaccag
1320
tctcaacaca caaagtgcc ccaccttccc tgactcagaa cccacatcca ctcaatgtga
1380
actctactac cagcactcc ccatattcct cacttctcca tcacctccag cctgactccc
1440

tgtctgccct ttcacccccca agatttttgca cagggttaagg ccagttatgg cctttttgaa
 1500
 atctgtaata gctcccccttt ccccaactct aaagcctaga ccttaaacct gttcctagag
 1560
 ctatgcacac ccctgccccca gtttaccggt cctccctcag ggcctccgtg acactccatg
 1620
 aaaagaagtt cttgcatacc ggaaagttga ataaatggat gaattcaaaa aaaaaaaaaa
 1680
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1712

<210> 5074

<211> 240

<212> PRT

<213> Homo sapiens

<400> 5074

Xaa	Trp	Lys	Gln	Leu	Ser	Gly	Glu	Gln	Val	Ser	Trp	Ser	Lys	Asp	Phe
1				5					10					15	
Pro	Ala	Val	Asp	Ser	Val	Leu	Val	Lys	Leu	Leu	Glu	Val	Met	Glu	Gly
			20					25					30		
Met	Asp	Lys	Glu	Thr	Phe	Glu	Phe	Lys	Phe	Gly	Lys	Glu	Leu	Thr	Phe
		35					40					45			
Thr	Thr	Val	Leu	Ser	Asp	Gln	Gln	Val	Val	Glu	Leu	Ile	Pro	Gly	Gly
	50					55					60				
Ala	Gly	Ile	Val	Val	Gly	Tyr	Gly	Asp	Arg	Ser	Arg	Phe	Ile	Gln	Leu
65					70				75					80	
Val	Gln	Lys	Ala	Arg	Leu	Glu	Glu	Ser	Lys	Glu	Gln	Val	Ala	Ala	Met
			85						90					95	
Gln	Ala	Gly	Leu	Leu	Lys	Val	Val	Pro	Gln	Ala	Val	Leu	Asp	Leu	Leu
			100					105					110		
Thr	Trp	Gln	Glu	Leu	Glu	Lys	Lys	Val	Cys	Gly	Asp	Pro	Glu	Val	Thr
		115					120					125			
Val	Asp	Ala	Leu	Arg	Lys	Leu	Thr	Arg	Phe	Glu	Asp	Phe	Glu	Pro	Ser
	130					135					140				
Asp	Ser	Arg	Val	Gln	Tyr	Phe	Trp	Glu	Ala	Leu	Asn	Asn	Phe	Thr	Asn
145					150				155					160	
Glu	Asp	Arg	Ser	Arg	Phe	Leu	Arg	Phe	Val	Thr	Gly	Arg	Ser	Arg	Leu
				165					170					175	
Pro	Ala	Arg	Xaa	Ser	Thr	Ser	Thr	Gln	Thr	Ser	Trp	Ala	Thr	Arg	Pro
			180					185					190		
Xaa	Asp	Ala	Leu	Pro	Glu	Ser	Ser	Thr	Cys	Ser	Ser	Thr	Leu	Phe	Leu
	195						200					205			
Pro	His	Tyr	Ala	Ser	Ala	Lys	Val	Cys	Glu	Glu	Lys	Leu	Arg	Tyr	Ala
	210					215					220				
Ala	Tyr	Asn	Cys	Val	Ala	Ile	Asp	Thr	Asp	Met	Ser	Pro	Trp	Glu	Glu
225					230					235					240

<210> 5075

<211> 444

<212> DNA

<213> Homo sapiens

<400> 5075

tatggaagat ggactggaac aaggacccag ccagttaagg aggcttagaa tgctgggagc
 60
 ctgacctctg cctgtggtat cacctctgcc tgtgataaca gacaaaacca ggaagtgtat
 120
 ttactaaaaa gaataaacag tgctcggtga atggtgagag gaccagagag gaaatgggaa
 180
 taagtaatag gcatgtggcc agcagaaaaa ggagccaata tataagaaag caacaagtaa
 240
 actgctcccc tcgatggcag tgggaagcct gctgggatgg tgggggatca ggaaacttct
 300
 ctagccctgg aacactgaga gagacagaag tgatcactgc tgtgttgga ctggggaggg
 360
 gtggggacca agtgaccgca gatcagaagt cactgaatat caacgccatg gagagagagc
 420
 tggctctttc gttaagagtt gcct
 444

<210> 5076

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5076

Met	Gly	Ile	Ser	Asn	Arg	His	Val	Ala	Ser	Arg	Lys	Arg	Ser	Gln	Tyr
1				5					10					15	
Ile	Arg	Lys	Gln	Gln	Val	Asn	Cys	Ser	Pro	Arg	Trp	Gln	Trp	Glu	Ala
			20					25					30		
Cys	Trp	Asp	Gly	Gly	Gly	Ser	Gly	Asn	Phe	Ser	Ser	Pro	Gly	Thr	Leu
		35				40						45			
Arg	Glu	Thr	Glu	Val	Ile	Thr	Ala	Val	Leu	Glu	Leu	Gly	Arg	Gly	Gly
		50				55					60				
Asp	Gln	Val	Thr	Ala	Asp	Gln	Lys	Ser	Leu	Asn	Ile	Asn	Ala	Met	Glu
65					70				75					80	
Arg	Glu	Leu	Ala	Leu	Ser	Leu	Arg	Val	Ala						
				85					90						

<210> 5077

<211> 2352

<212> DNA

<213> Homo sapiens

<400> 5077

ttttttttt tttttttcaa atgcagcata ttttaatttg tttcaaataa agcaatatat
 60
 gtatatatat tttttcagaa aaacaccaga tgttaaattc tacaaaagcg catgtgtcct
 120
 cagcagatca tgtttgtctg attattaaga attctttttt gtaacattaa ctctctaaag
 180
 acaatcaatg gactgacatc actgctacaa cacagggtgc taactgagcc tctgatcttc
 240
 agccacatct tgattttcct aataatgagt aaatactgcc tggctaaaat gctgcaaagt
 300
 cttgatgaga gaaagcatca acagatcaag caaagccatg aaaattatga agcaagctag
 360

agctgattat tagaattagt aaaaatgatt aagagaggat gacacaacca tacgggattt
420
gtatatattctg attgacactc ttttggcagc gaattgggtc agcacctcgg gcagggaacc
480
aaaactgagt gaaaactgct ctttttcctc ctagctcagg ccaccaacgt cacagccggg
540
actgagagaa ctgctgcatc tgtggaaact tctattctcg tggggcagag attgcactgt
600
gaaaccctac cgacactacc ccggaagggc ctggcctccg aggtgtctgc agcgtgctgc
660
cttcgccggg gcttttcaga atgggccggg gcctcggggg tcttcatccc caaggaagcc
720
tcttgatttt tggcaccgcc tttgtttttg ggccggaagc cgttggtcgg ctgtcttctg
780
tgttcgtggc ggctgttgcc ctttcccagt ggctcggctt cattcccact gccctgcgac
840
ttggcaggcc catttagcct gttgttatga tactgtggat taaatctccg tctttggtta
900
gaagatccat tctgcttggt ggccggcatg gtctgggtgag aggggtcggc ggtgctgggg
960
agactgctca ccattttggg gtttgccgct ttgccttcag agggcttatt gtgagtggat
1020
gattttcggg aaaagttact ctgtttccca gaggttgctg cgtgcgcatt cagcagaggg
1080
agcagggagc tgcagggagt tcttgaggaa tagttgttct ttggatgtgt aatttctccg
1140
cagagcatga tttgggcctt cagctgttcg atgtcacagg aaaaccgggc agctttcccc
1200
agctcctcgt catatttacg ctgcgtgaca aagtgcctaa tttctgccct gagttcggcc
1260
agctgcatct ctgccatctg actggcaagg tcagtgaagc tctttagtcc ttctgctttc
1320
ttctgacgag cagtcaggat ttccatggct tcttctttaa ctttatccat ttctgccatt
1380
aatgaaactt ctttgtcaat gatgcagttg tgtaattcag caaaggcagc tttgatcttc
1440
ttcacggaac tatccacttc ttcccttaatc atgacgcgat atctagttag agaaacgggtg
1500
cagcgttgca aatccttcac tgattttctca atatttgggc ctcttttctt tgccaactca
1560
tctggcttta tttcaagatg agctgcaggg gtattggact taacaggaga tgtttttgcc
1620
ttaggcttgc ttgggttaca aggtgctca gctgaccact gtaggccatc tgacctctct
1680
gttgttccat gtataggttt ggggttccca tctaaggata gtttctgttg cagtagtctg
1740
ttgccttctg tgacccacg aagtgccttt gaaggctcct caagtatcga gatcttttct
1800
tcacgagga taagggtcgg tttttcgtaa gcagaatctg tggacgagct gtccttctcg
1860
cagccattca tggggccggt ttgaatctgt ggtggctgcg gctgcagggg ccctgcctca
1920
ggcctctcca ccttgctttt agcatctttg ttgccttgat gctgcttga cttgcttctt
1980

tttcttttat tgttcttctt ttttcctgtc atattccatt cttttagaac ttgaattgca
 2040
 ctgccatcca caaaggcttg cacggcttta tccacattaa aatcaaactg ttggagcacc
 2100
 aggactatatt cattattgct tttgttggga acaactgatc taactgcata gatcttttcc
 2160
 ttgacattca catgagtatt gagttcagcc atcttgcttc tagcggaata ggccttggga
 2220
 atccacagca atgttctga aagcagcctg gtttctgaag agctctgaaa aatcaggcgc
 2280
 ggaaaaagtg ctggagctcg ggtcagccct tggaaaccgc accaaccgcg ggtgttccgc
 2340
 cgcctcctct gc
 2352

<210> 5078

<211> 558

<212> PRT

<213> Homo sapiens

<400> 5078

Met Ala Glu Leu Asn Thr His Val Asn Val Lys Glu Lys Ile Tyr Ala
 1 5 10 15
 Val Arg Ser Val Val Pro Asn Lys Ser Asn Asn Glu Ile Val Leu Val
 20 25 30
 Leu Gln Gln Phe Asp Phe Asn Val Asp Lys Ala Val Gln Ala Phe Val
 35 40 45
 Asp Gly Ser Ala Ile Gln Val Leu Lys Glu Trp Asn Met Thr Gly Lys
 50 55 60
 Lys Lys Asn Asn Lys Arg Lys Arg Ser Lys Ser Lys Gln His Gln Gly
 65 70 75 80
 Asn Lys Asp Ala Lys Asp Lys Val Glu Arg Pro Glu Ala Gly Pro Leu
 85 90 95
 Gln Pro Gln Pro Pro Gln Ile Gln Asn Gly Pro Met Asn Gly Cys Glu
 100 105 110
 Lys Asp Ser Ser Ser Thr Asp Ser Ala Asn Glu Lys Pro Ala Leu Ile
 115 120 125
 Pro Arg Glu Lys Lys Ile Ser Ile Leu Glu Glu Pro Ser Lys Ala Leu
 130 135 140
 Arg Gly Val Thr Glu Gly Asn Arg Leu Leu Gln Gln Lys Leu Ser Leu
 145 150 155 160
 Asp Gly Asn Pro Lys Pro Ile His Gly Thr Thr Glu Arg Ser Asp Gly
 165 170 175
 Leu Gln Trp Ser Ala Glu Gln Pro Cys Asn Pro Ser Lys Pro Lys Ala
 180 185 190
 Lys Thr Ser Pro Val Lys Ser Asn Thr Pro Ala Ala His Leu Glu Ile
 195 200 205
 Lys Pro Asp Glu Leu Ala Lys Lys Arg Gly Pro Asn Ile Glu Lys Ser
 210 215 220
 Val Lys Asp Leu Gln Arg Cys Thr Val Ser Leu Thr Arg Tyr Arg Val
 225 230 235 240
 Met Ile Lys Glu Glu Val Asp Ser Ser Val Lys Lys Ile Lys Ala Ala
 245 250 255
 Phe Ala Glu Leu His Asn Cys Ile Ile Asp Lys Glu Val Ser Leu Met

260	265	270
Ala Glu Met Asp Lys Val Lys Glu Glu Ala Met Glu Ile Leu Thr Ala		
275	280	285
Arg Gln Lys Lys Ala Glu Glu Leu Lys Arg Leu Thr Asp Leu Ala Ser		
290	295	300
Gln Met Ala Glu Met Gln Leu Ala Glu Leu Arg Ala Glu Ile Lys His		
305	310	315
Phe Val Ser Glu Arg Lys Tyr Asp Glu Glu Leu Gly Lys Ala Ala Arg		
325	330	335
Phe Ser Cys Asp Ile Glu Gln Leu Lys Ala Gln Ile Met Leu Cys Gly		
340	345	350
Glu Ile Thr His Pro Lys Asn Asn Tyr Ser Ser Arg Thr Pro Cys Ser		
355	360	365
Ser Leu Leu Pro Leu Leu Asn Ala His Ala Ala Thr Ser Gly Lys Gln		
370	375	380
Ser Asn Phe Ser Arg Lys Ser Ser Thr His Asn Lys Pro Ser Glu Gly		
385	390	395
Lys Ala Ala Asn Pro Lys Met Val Ser Ser Leu Pro Ser Thr Ala Asp		
405	410	415
Pro Ser His Gln Thr Met Pro Ala Asn Lys Gln Asn Gly Ser Ser Asn		
420	425	430
Gln Arg Arg Arg Phe Asn Pro Gln Tyr His Asn Asn Arg Leu Asn Gly		
435	440	445
Pro Ala Lys Ser Gln Gly Ser Gly Asn Glu Ala Glu Pro Leu Gly Lys		
450	455	460
Gly Asn Ser Arg His Glu His Arg Arg Gln Pro His Asn Gly Phe Arg		
465	470	475
Pro Lys Asn Lys Gly Gly Ala Lys Asn Gln Glu Ala Ser Leu Gly Met		
485	490	495
Lys Thr Pro Glu Ala Pro Ala His Ser Glu Lys Pro Arg Arg Arg Gln		
500	505	510
His Ala Ala Asp Thr Ser Glu Ala Arg Pro Phe Arg Gly Ser Val Gly		
515	520	525
Arg Val Ser Gln Cys Asn Leu Cys Pro Thr Arg Ile Glu Val Ser Thr		
530	535	540
Asp Ala Ala Val Leu Ser Val Pro Ala Val Thr Leu Val Ala		
545	550	555

<210> 5079

<211> 1338

<212> DNA

<213> Homo sapiens

<400> 5079

```

ggcctccctc gttgccccag cctcgcgggc cgcctaactg ccccgttcca aggggtgccac
60
cggaccccg c tggagaggaa cttctccgtt ggctgatttc atcaccaccc attcccgatt
120
ccaagtcttc tttaagcggg gctggcggag ccgcaaggcg gcaaggaact ggattgcat
180
tggtcagcac gtgctcggg cggcggtaca attggctgag gcgctgggccc ttgggaagca
240
ttccccgacg ggattggtcg tcgctctcgc agagcccgc tcccgagta caagcgggccc
300

```

ccgggtcggg tgggaggagg ggactccggg aggaggaaca tggcgggtggc ggacctcgct
 360
 ctcattcctg atgtggacat cgactccgac ggcgtcttca agtatgtgct gatccgagtc
 420
 cactcggtc cccgctccgg ggctccggct gcagagagca aggagatcgt gcgaggctac
 480
 aagtgggctg agtaccatgc ggacatctac gacaaagtgt cgggagacat gcagaagcaa
 540
 ggctgcgact gtgagtgtct gggcggcggg cgcattctcc accagagtca ggacaagaag
 600
 attcacgtgt acggctattc catggtgagc cgcagccccg tcccgccctg ccggaggccc
 660
 cagtaccagc ttcgaggccc acctgagcct gctgccctga cccgtggccc cagctgagca
 720
 cgcaggcttc ctggggttct cccagggtcg gcggcagagc cctccctcca gggccattg
 780
 tgttctgca tcccccatg gagcacacgc cagacctgag ggggtgggacg gacaccccca
 840
 ggcatggccg gctgtctcct ctccctgcct tgggaggcct tgctgggctc tagctgtcct
 900
 ccagcacttt gggccctggg ccccagagg cagtcagtac ctgggtggag ctcagagtcc
 960
 ccacctgtgc tcttcacaaa aaccaccagc agatgagacc cacgtgcgtc cctctgggag
 1020
 cctcaggccc caggatccac catcaaggcc tatggctcctg cccagcacgc catttcaact
 1080
 gagaaaaatca aagccaagta ccccgactac gaggtcacct gggctaacga cggctactga
 1140
 gcaactcccag cccggggcct gctgcctcca gcagccactt cagagccccc gcctttgcct
 1200
 gcactcctct tgcagggtcg gccctgcctg ctctgcggc agcctctggt gacgtgctgt
 1260
 ccaccaggcc ttggagacag gctagcctgg ccacagaatt aaacgtgttg ccacacaaa
 1320
 aaaaaaaaaa aaaaaaaaa
 1338

<210> 5080

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5080

Gly	Ala	Gly	Pro	Trp	Glu	Ala	Phe	Pro	Asp	Gly	Ile	Gly	Arg	Arg	Ser
1				5					10					15	
Arg	Arg	Ala	Arg	Leu	Pro	Gln	Tyr	Lys	Arg	Pro	Pro	Gly	Arg	Val	Gly
			20					25					30		
Gly	Gly	Asp	Ser	Gly	Arg	Arg	Asn	Met	Ala	Val	Ala	Asp	Leu	Ala	Leu
		35					40					45			
Ile	Pro	Asp	Val	Asp	Ile	Asp	Ser	Asp	Gly	Val	Phe	Lys	Tyr	Val	Leu
	50					55					60				
Ile	Arg	Val	His	Ser	Ala	Pro	Arg	Ser	Gly	Ala	Pro	Ala	Ala	Glu	Ser
65					70				75					80	
Lys	Glu	Ile	Val	Arg	Gly	Tyr	Lys	Trp	Ala	Glu	Tyr	His	Ala	Asp	Ile

```

      85      90      95
Tyr Asp Lys Val Ser Gly Asp Met Gln Lys Gln Gly Cys Asp Cys Glu
      100      105      110
Cys Leu Gly Gly Gly Arg Ile Ser His Gln Ser Gln Asp Lys Lys Ile
      115      120      125
His Val Tyr Gly Tyr Ser Met Val Ser Arg Ser Pro Val Pro Pro Cys
      130      135      140
Arg Arg Pro Gln Tyr Gln Leu Arg Gly Pro Pro Glu Pro Ala Ala Leu
145      150      155      160
Thr Arg Gly Pro Ser
      165

```

<210> 5081
 <211> 561
 <212> DNA
 <213> Homo sapiens

```

<400> 5081
nnccggccggc ctgggctcgg gggctccggg ctctgggctc tgggtgcgcg gaccggggcca
60
ggctgcttga agacctcgcg acctgtgtca gcagagccgc cctgcaccac catgtgcatc
120
atcttcttta agtttgatcc tcgccctgtt tccaaaaacg cgtacaggta accccctcgc
180
tctgcatctg ctgcgccttg cagggctctg ggtgcccagc cagttctcat gccacccaag
240
ctgctgtgtg caggaagggtg tgtggggccag gacggggctg cacaggcctg gcaactgccct
300
ccaggacagg gtcactcagt gtgggatgct gtcagaatgc ctctcggggc ggggactcca
360
gtcaatgtac aaagacgtga agactcagcc acagaaggca gccacaggct catcttggca
420
gccaacaggg atgaattcta cagccgaccc tccaagttag ctgacttctg ggggaacaac
480
aagcagatcc tcagtgggct ggacatggag gaaggcaagg aaggaggcac atggctgggc
540
atcagcacac gtggcaagct g
561

```

<210> 5082
 <211> 111
 <212> PRT
 <213> Homo sapiens

```

<400> 5082
Met Pro Pro Lys Leu Leu Cys Ala Gly Arg Cys Val Gly Gln Asp Gly
1      5      10      15
Ala Ala Gln Ala Trp His Cys Pro Pro Gly Gln Gly His Ser Val Trp
20      25      30
Asp Ala Val Arg Met Pro Leu Gly Ala Gly Thr Pro Val Asn Val Gln
35      40      45
Arg Arg Glu Asp Ser Ala Thr Glu Gly Ser His Arg Leu Ile Leu Ala
50      55      60
Ala Asn Arg Asp Glu Phe Tyr Ser Arg Pro Ser Lys Leu Ala Asp Phe

```

65					70					75					80
Trp	Gly	Asn	Asn	Asn	Glu	Ile	Leu	Ser	Gly	Leu	Asp	Met	Glu	Glu	Gly
				85					90					95	
Lys	Glu	Gly	Gly	Thr	Trp	Leu	Gly	Ile	Ser	Thr	Arg	Gly	Lys	Leu	
				100				105					110		

<210> 5083

<211> 1856

<212> DNA

<213> Homo sapiens

<400> 5083

```

nnggccacta ggcacgggac agagcagtcg gtgacaggac agagcagtcg gtgacgggac
60
acagtgggttg gtgacgggac agagcggtcg gtgacagcct caagggttcc agcaccgcgc
120
ccatggcaga gccagaccga ctcagattca gactctgagg gaggagccgc tgggtggagaa
180
gcagacatgg acttctctgc gaacttattc tcccagacgc tcagcctggg cagccagaag
240
gagcgtctgc tggacgagct gaccttggaa ggggtggccc ggtacatgca gagcgaacgc
300
tgtcgagagc tcatctgttt ggtgggagct ggaatctcca catccgcagg catccccgac
360
tttcgctctc catccaccgg cctctatgac aacctagaga agtaccatct tccctaccca
420
gaggccatct ttgagatcag ctatttcaag aaacatccgg aacccttctt cgccctcgcc
480
aaggaactct atcctgggca gttcaagcca accatctgtc actacttcat gcgctgtctg
540
aaggacaagg ggctactcct gcgctgttac acgcagaaca tagataccct ggagcgaata
600
gccgggctgg aacaggagga cttgggtggag gcgcacggca ccttctacac atcacactgc
660
gtcagcgcca gctgccggca cgaatacccg ctaagctgga tgaaagagaa gatcttctct
720
gaggtgacgc ccaagtgtga agactgtcag agcctggtga agcctgatat cgtctttttt
780
ggtgagagcc tcccagcgcg tttcttctcc tgtatgcagt cagacttctt gaaggtggac
840
ctcctcctgg tcatgggtac ctcttgcag gtgcagccct ttgcctccct catcagcaag
900
gcacccctct ccacccctcg cctgctcatc aacaaggaga aagctggcca gtcggaccct
960
ttcctgggga tgattatggg cctcggagga ggcattgact ttgactcaa gaaggcctac
1020
agggacgtgg cctggctggg tgaatgcgac cagggctgcc tggcccttgc tgagctcctt
1080
ggatggaaga aggagctgga ggaccttgtc cggagggagc acgccagcat agatgcccag
1140
tcgggggagg ggggtcccaa ccccagcact tcagcttccc ccaagaagtc cccgccacct
1200
gccaaggacg aggccaggac aacagagagg gagaaacccc agtgacagct gcatttccca
1260

```

ggcggtatgt cgagctcctc agggacagct gagccccaac cgggcctggc cccctcttaa
 1320
 ccagcagttc ttgtctgggg agctcagaac atcccccaat ctcttacagc tccctcccca
 1380
 aaactgggggt cccagcaacc ctggccccc aacccagcaa atctctaaca cctcctagag
 1440
 gccaaaggctt aaacaggcat ctctaccagc cccactgtct ctaaccactc ctgggctaag
 1500
 gagtaacctc cctcatctct aactgcccc acgggggccag ggctacccca gaacttttaa
 1560
 ctcttccagg acagggagct tcgggcccc actctgtctc ctgcccccg ggcctgtgg
 1620
 ctaagtaaac catacctaac ctacccaggt gtgggtgtgg gcctctgaat ataaccaca
 1680
 cccagcgtag ggggagctct agccgggagg gctcccgagt ctctgccttc agtcccaaa
 1740
 gtgggtgttg ggcccccttc acgtgggacc cacttcccat gctggatggg cagaagacat
 1800
 tgcttattgg agacaaatta aaaacaaaaa caactaaca aaaaaaaaaa aaaaaa
 1856

<210> 5084

<211> 396

<212> PRT

<213> Homo sapiens

<400> 5084

Arg	Asp	Thr	Val	Val	Gly	Asp	Gly	Thr	Glu	Arg	Ser	Val	Thr	Ala	Ser
1				5					10					15	
Arg	Ala	Ser	Ala	Pro	Arg	Pro	Trp	Gln	Ser	Gln	Thr	Asp	Ser	Asp	Ser
			20					25					30		
Asp	Ser	Glu	Gly	Gly	Ala	Ala	Gly	Gly	Glu	Ala	Asp	Met	Asp	Phe	Leu
		35					40					45			
Arg	Asn	Leu	Phe	Ser	Gln	Thr	Leu	Ser	Leu	Gly	Ser	Gln	Lys	Glu	Arg
	50					55					60				
Leu	Leu	Asp	Glu	Leu	Thr	Leu	Glu	Gly	Val	Ala	Arg	Tyr	Met	Gln	Ser
65					70					75				80	
Glu	Arg	Cys	Arg	Arg	Val	Ile	Cys	Leu	Val	Gly	Ala	Gly	Ile	Ser	Thr
			85					90						95	
Ser	Ala	Gly	Ile	Pro	Asp	Phe	Arg	Ser	Pro	Ser	Thr	Gly	Leu	Tyr	Asp
			100					105					110		
Asn	Leu	Glu	Lys	Tyr	His	Leu	Pro	Tyr	Pro	Glu	Ala	Ile	Phe	Glu	Ile
	115						120					125			
Ser	Tyr	Phe	Lys	Lys	His	Pro	Glu	Pro	Phe	Phe	Ala	Leu	Ala	Lys	Glu
	130					135					140				
Leu	Tyr	Pro	Gly	Gln	Phe	Lys	Pro	Thr	Ile	Cys	His	Tyr	Phe	Met	Arg
145				150						155				160	
Leu	Leu	Lys	Asp	Lys	Gly	Leu	Leu	Leu	Arg	Cys	Tyr	Thr	Gln	Asn	Ile
			165					170					175		
Asp	Thr	Leu	Glu	Arg	Ile	Ala	Gly	Leu	Glu	Gln	Glu	Asp	Leu	Val	Glu
		180					185					190			
Ala	His	Gly	Thr	Phe	Tyr	Thr	Ser	His	Cys	Val	Ser	Ala	Ser	Cys	Arg
		195					200					205			
His	Glu	Tyr	Pro	Leu	Ser	Trp	Met	Lys	Glu	Lys	Ile	Phe	Ser	Glu	Val

210 215 220
 Thr Pro Lys Cys Glu Asp Cys Gln Ser Leu Val Lys Pro Asp Ile Val
 225 230 235 240
 Phe Phe Gly Glu Ser Leu Pro Ala Arg Phe Phe Ser Cys Met Gln Ser
 245 250 255
 Asp Phe Leu Lys Val Asp Leu Leu Leu Val Met Gly Thr Ser Leu Gln
 260 265 270
 Val Gln Pro Phe Ala Ser Leu Ile Ser Lys Ala Pro Leu Ser Thr Pro
 275 280 285
 Arg Leu Leu Ile Asn Lys Glu Lys Ala Gly Gln Ser Asp Pro Phe Leu
 290 295 300
 Gly Met Ile Met Gly Leu Gly Gly Gly Met Asp Phe Asp Ser Lys Lys
 305 310 315 320
 Ala Tyr Arg Asp Val Ala Trp Leu Gly Glu Cys Asp Gln Gly Cys Leu
 325 330 335
 Ala Leu Ala Glu Leu Leu Gly Trp Lys Lys Glu Leu Glu Asp Leu Val
 340 345 350
 Arg Arg Glu His Ala Ser Ile Asp Ala Gln Ser Gly Ala Gly Val Pro
 355 360 365
 Asn Pro Ser Thr Ser Ala Ser Pro Lys Lys Ser Pro Pro Pro Ala Lys
 370 375 380
 Asp Glu Ala Arg Thr Thr Glu Arg Glu Lys Pro Gln
 385 390 395

<210> 5085

<211> 2964

<212> DNA

<213> Homo sapiens

<400> 5085

nactgcccacat ccccggttgt cccacttttg ttcgcctctc ttcggccctc tactcaagag
 60
 ctccgtctcc gtctcgccct cctcgaagtc ctctgcgcgc gcccgcgacc caggctcgccc
 120
 tgaaatctag cccgtccgag cgcgagtgca acggccgcgg ccgcaccaag gccccctcag
 180
 accgtgccat gggtgacagt gatgacgagt acgatcgaag gcgcagggac aagttcagaa
 240
 gagagcgag cgactacgac cgttcccgcg agagagatga aagacgtcga ggggacgatt
 300
 ggaatgacag agagtgggac cgtggccgtg agcgccgtag tcggggtgaa tatcggggact
 360
 atgaccggaa tcggcgagag cgcttctcgc cacctcgcca cgaactcagc ccgccacaga
 420
 agcgcatgag gagagactgg gatgagcaca gctctgaccc ataccacagt ggctatgaga
 480
 tggcctatgc tngggggggg tgggggcccc acttatggcc cccctcagcc ctggggccac
 540
 cctgacgtcc acatcatgca gcaccatgtc ctgcctatcc agggcaggct gggcagcatt
 600
 gcagagattg acctgggtgt gccgcgccc gtgatgaaga ccttcaagga gtttctcctc
 660
 tccctggatg actcgggtgga tgagacggag gccgtcaagc gctataatga ctacaagctg
 720

gatttccgga ggcaacagat gcaggatttc ttcctggcgc acaaagatga ggagtggttt
780
cggctctaagt accaccaga tgaggtgggg aagcgtcggc aggaggcccg gggggccctg
840
caaaaccgac tgaggggtctt cctgtccctc atggagactg gctggtttga taaccttctc
900
ctggacatag acaaagctga tgccattgtc aagatgctgg atgcagccgt gattaagatg
960
gaaggaggca cggagaatga tcttcgcctc ctggagcagg aggaggagga ggagcaggca
1020
ggaaagcctg gggagcccag caagaaagaa gaaggacggg ctggagcagg cctaggggac
1080
ggggagcgca aaaccaacga caaggatgag aagaaggaag acggcaagca ggctgagaat
1140
gacagtctta atgatgacaa aacaaagaag tcggagggtg atggggacaa ggaagagaag
1200
aaagaagact ccgagaagga agccaaaaag agtagcaaga agcggaaacc gaagcacagt
1260
ggtgacgaca gctttgacga gggcagcgtg tcagagtctg agtcggagtc agagagcggc
1320
caggctgagg aggagaagga ggaggccgaa gaagcgtca aggagaagga gaagcccaag
1380
gaagaagaat gggagaagcc caaggacgcc gcggggctgg agtgcaagcc gcggccgctg
1440
cataagacct gctccctctt catgcgcaac atcgcgccc acatctccc ggccgagatc
1500
atctcccttt gtaaaaggtt cccaggcttt atgcgggtgg cgctctcaga gccccagcca
1560
gagaggaggt ttttccgtcg tggtgggtg accttcgacc gcagtgttaa cattaaagag
1620
atctgttgga acctgcagaa catccgtctc cgggagtgtg agctgagccc tgggtgtaac
1680
agggacctga cccggcgcgt tcgcaacatc aacggcatca cccagcaca gcagattgtg
1740
cgcaacgaca tcaagctggc ggccaagctg atccacacgc tggatgacag gacacagctt
1800
tgggcctcag aaccagggac gcctcccctg cccacgagcc tgcctcgcga aaacccgatc
1860
ttgaagaata tcaccgacta cctgatcgag gaagtaagcg ccgaggagga ggagctgctg
1920
gggagcagcg ggggcgctcc tcctgaggag cctcctaagg aagggaaccc ggcagagatc
1980
aacgtggagc gggatgagaa gttgattaag gtcttgaca agctcctcct ttacctgcgc
2040
atcgtgcatt ccttgatta ttacaacacc tgtgagtacc ccaacgagga cgagatgccc
2100
aatcgcgtg ggatcatcca cgttcggggg cccatgccac ccaaccgcat cagtcacggg
2160
gaagtgtggt agtggcagaa gacttttgag gagaagctca cgccgttgct gagtgtgcgg
2220
gagtcactct cagaggaaga ggcccagaag atggggcgca aagaccaga gcaggaagtg
2280
gagaagtctg tcacctcaa cacgcaggaa ctgggcaagg ataagtggct gtgtcctctc
2340

agtggcaaga aattcaaggg tcctgagttt gtgcgcaaac atatcttcaa caagcatgca
 2400
 gagaaaattg aggaagtga aaaggaagtc gcgtttttta acaacttcct cactgatgct
 2460
 aagcgcccag ctctgcctga gatcaagcca gccagccac ctggccccgc ccagatactc
 2520
 cccccaggtt tgaccccagg actcccctac ccacaccaga ctccccaggg cctgatgccc
 2580
 tatggtcagc cccggcccc gatcttgggc tatggagctg gtgctgtccg ccctgcagtc
 2640
 cccacaggag gccctccata ccccatgcc ccgtatggtg ctggtcgagg gaactatgat
 2700
 gccttccgag gccagggagg ttatcctggg aaacctcgca acaggatggt tcgtggagac
 2760
 ccaagggcca ttgtggaata tcgggacctg gatgcccag acgatgttga tttcttttga
 2820
 gccgtcccc gttcctcagt cctgtatcat ccatacttgt actaccttgt cctatgaagc
 2880
 tctgagaatt tttgtacga tcagccttac tgctaataaa agcacttcca cagggaaaaa
 2940
 aaaaaaaaaa aaaaaaagtc gacg
 2964

<210> 5086

<211> 792

<212> PRT

<213> Homo sapiens

<400> 5086

Met	Ser	Thr	Ala	Leu	Thr	His	Thr	Thr	Val	Ala	Met	Arg	Cys	Pro	Met
1				5					10					15	
Leu	Xaa	Gly	Gly	Gly	Gly	Pro	Thr	Tyr	Gly	Pro	Pro	Gln	Pro	Trp	Gly
			20					25					30		
His	Pro	Asp	Val	His	Ile	Met	Gln	His	His	Val	Leu	Pro	Ile	Gln	Ala
			35				40					45			
Arg	Leu	Gly	Ser	Ile	Ala	Glu	Ile	Asp	Leu	Gly	Val	Pro	Pro	Pro	Val
			50				55				60				
Met	Lys	Thr	Phe	Lys	Glu	Phe	Leu	Leu	Ser	Leu	Asp	Asp	Ser	Val	Asp
65					70				75					80	
Glu	Thr	Glu	Ala	Val	Lys	Arg	Tyr	Asn	Asp	Tyr	Lys	Leu	Asp	Phe	Arg
				85				90						95	
Arg	Gln	Gln	Met	Gln	Asp	Phe	Phe	Leu	Ala	His	Lys	Asp	Glu	Glu	Trp
			100					105					110		
Phe	Arg	Ser	Lys	Tyr	His	Pro	Asp	Glu	Val	Gly	Lys	Arg	Arg	Gln	Glu
			115				120					125			
Ala	Arg	Gly	Ala	Leu	Gln	Asn	Arg	Leu	Arg	Val	Phe	Leu	Ser	Leu	Met
			130				135					140			
Glu	Thr	Gly	Trp	Phe	Asp	Asn	Leu	Leu	Leu	Asp	Ile	Asp	Lys	Ala	Asp
145					150					155				160	
Ala	Ile	Val	Lys	Met	Leu	Asp	Ala	Ala	Val	Ile	Lys	Met	Glu	Gly	Gly
			165					170						175	
Thr	Glu	Asn	Asp	Leu	Arg	Ile	Leu	Glu	Gln	Glu	Glu	Glu	Glu	Glu	Gln
			180					185					190		
Ala	Gly	Lys	Pro	Gly	Glu	Pro	Ser	Lys	Lys	Glu	Glu	Gly	Arg	Ala	Gly

195	200	205
Ala Gly Leu Gly Asp Gly Glu Arg Lys Thr Asn Asp Lys Asp Glu Lys		
210	215	220
Lys Glu Asp Gly Lys Gln Ala Glu Asn Asp Ser Ser Asn Asp Asp Lys		
225	230	235
Thr Lys Lys Ser Glu Gly Asp Gly Asp Lys Glu Glu Lys Lys Glu Asp		
245	250	255
Ser Glu Lys Glu Ala Lys Lys Ser Ser Lys Lys Arg Asn Arg Lys His		
260	265	270
Ser Gly Asp Asp Ser Phe Asp Glu Gly Ser Val Ser Glu Ser Glu Ser		
275	280	285
Glu Ser Glu Ser Gly Gln Ala Glu Glu Glu Lys Glu Glu Ala Glu Glu		
290	295	300
Ala Leu Lys Glu Lys Glu Lys Pro Lys Glu Glu Glu Trp Glu Lys Pro		
305	310	315
Lys Asp Ala Ala Gly Leu Glu Cys Lys Pro Arg Pro Leu His Lys Thr		
325	330	335
Cys Ser Leu Phe Met Arg Asn Ile Ala Pro Asn Ile Ser Arg Ala Glu		
340	345	350
Ile Ile Ser Leu Cys Lys Arg Tyr Pro Gly Phe Met Arg Val Ala Leu		
355	360	365
Ser Glu Pro Gln Pro Glu Arg Arg Phe Phe Arg Arg Gly Trp Val Thr		
370	375	380
Phe Asp Arg Ser Val Asn Ile Lys Glu Ile Cys Trp Asn Leu Gln Asn		
385	390	395
Ile Arg Leu Arg Glu Cys Glu Leu Ser Pro Gly Val Asn Arg Asp Leu		
405	410	415
Thr Arg Arg Val Arg Asn Ile Asn Gly Ile Thr Gln His Lys Gln Ile		
420	425	430
Val Arg Asn Asp Ile Lys Leu Ala Ala Lys Leu Ile His Thr Leu Asp		
435	440	445
Asp Arg Thr Gln Leu Trp Ala Ser Glu Pro Gly Thr Pro Pro Leu Pro		
450	455	460
Thr Ser Leu Pro Ser Gln Asn Pro Ile Leu Lys Asn Ile Thr Asp Tyr		
465	470	475
Leu Ile Glu Glu Val Ser Ala Glu Glu Glu Glu Leu Leu Gly Ser Ser		
485	490	495
Gly Gly Ala Pro Pro Glu Glu Pro Pro Lys Glu Gly Asn Pro Ala Glu		
500	505	510
Ile Asn Val Glu Arg Asp Glu Lys Leu Ile Lys Val Leu Asp Lys Leu		
515	520	525
Leu Leu Tyr Leu Arg Ile Val His Ser Leu Asp Tyr Asn Thr Cys		
530	535	540
Glu Tyr Pro Asn Glu Asp Glu Met Pro Asn Arg Cys Gly Ile Ile His		
545	550	555
Val Arg Gly Pro Met Pro Pro Asn Arg Ile Ser His Gly Glu Val Leu		
565	570	575
Glu Trp Gln Lys Thr Phe Glu Glu Lys Leu Thr Pro Leu Leu Ser Val		
580	585	590
Arg Glu Ser Leu Ser Glu Glu Glu Ala Gln Lys Met Gly Arg Lys Asp		
595	600	605
Pro Glu Gln Glu Val Glu Lys Phe Val Thr Ser Asn Thr Gln Glu Leu		
610	615	620
Gly Lys Asp Lys Trp Leu Cys Pro Leu Ser Gly Lys Lys Phe Lys Gly		

```
<210> 5087
<211> 4949
<212> DNA
<213> Homo sapiens
```

```

<400> 5087
gcctaactgc cccgttccaa ggggtgccacc ggaccccgtt ggagaggaac ttctccgttg
60
gctgatttca tcaccaccca ttcccgattc cacgtttcct ttaagcgggt ctggcggacg
120
caaggcgtca aggaactgga ttgcgattgg tcagcacgtg cctcggtcgg cgggtacaatt
180
ggctgaggcg ctgggccttg ggaagcattc cccgacggga ttggtcgtcg ctctcgcaga
240
gcccgcctcc cgcagtacaa gcggcccccg ggtcgggtgg gaggagggga ctccgggagg
300
aggaacatgg cggtggcgga cctcgtcttc attcctgatg tggacatcga ctccgacggc
360
gtcttcaagt atgtgctgat ccgagtccac tcggctcccc gctccggggc tccggctgca
420
gagagcaagg agatcgtgcg cggctacaag tgggctgagt accatgcgga catctacgac
480
aaagtgtcgg gcgacatgca gaagcaaggc tgcgactgtg agtgtctggg cggcggggcg
540
atctcccacc agagtcagga caagaagatt cacgtgtacg gctattccat ggcctatggt
600
cctgcccagc acgccatttc aactgagaaa atcaaagcca agtaccgccg ctacgaggtc
660
acctggggcta acgacggcta ctgagcactc ccagcccggg gcctgctgcc tccagcagcc
720
acttcagagc ccccgccctt gcctgcactc ctcttgacgg gctggccctg cctgctcctg
780

```

cggcagcctc tggtagcgtg ctgtccacca ggccttggag acaggctagc ctggccacag
840
aattaaacgt gttgccacac ctgccggctt ctgaactctg tccttggctt cctgcaccct
900
gcgtcaccac ctccgggggc cccagaccc taactaaagc agggaccctg tatctggcac
960
cggacagcac ctggctgctc aggacgaatg aatgacggcg tgatcctcca cagcctgact
1020
taaaggcacc ctgtgtggcc gactgctcc ctctggccca accatgcctc tgtccagcca
1080
cctgctgccc gccttggctc tgttctctggg agccttggcc aggcctgtg caacttcgtg
1140
tgtgactgca gggactgctc agatgaggcc cagtgtgggtt accacggggc ctgcccacc
1200
ctggggcggc ccttcgcctg tgacttcgag caggaccctt gcggctggcg ggacattagt
1260
acctcaggct acagctggct ccgagacagg gcaggggccc cactggaggg tcctgggcct
1320
cactcagacc acacactggg caccgacttg ggtgaggcca gggcaagtct ctgtgcggcc
1380
ctgtcccaat accctccttg ctccctgccc cgtctcctga cctctcacct gcgccaggct
1440
ggtacatggc cgttgaacc caccgaggga aagaggcatc caccgcagcc ctgcgctcgc
1500
caaccctgcg agaggcagcc tcctcttgca agctgaggct ctggtaccac gcggcctctg
1560
gaggtgcacc ctggaccccc aaggctcgtg gggggtgccc aaggggaggg cgggtgggca
1620
gctggggaca agcagggccc cagctgccct gggacccctg acattgcaga tgtggctgaa
1680
ctgcgggtgg agctgacca tggcgagag accctgacct tgtggcagag cacagggccc
1740
tggnggccct ggnnctggca ggagtggca gtgaccacag gccgcatccg gggtgacttc
1800
cgagtgcct tctctgccac ccgaaatgcc acccacaggg gcgctgtggc tctagatgac
1860
ctagagttct gggactgtgg tctgccacc cccagggcca actgtcccc gggacaccac
1920
cactgccaga acaaggtctg cgtggagccc cagcagctgt gcgacgggga agacaactgc
1980
ggggacctgt ctgatgagaa cccactcacc tgtggccgcc acatagccac cgactttgag
2040
acaggcctgg gcccatggaa ccgctcggaa ggctggctcc ggaaccaccg tgctgggtgt
2100
cctgagcgcc cctcctggcc acgcccgtgac cacagccgga acagtgcann caggctggct
2160
ttctatcagt acctgagtgg gtctgaggct ggctgctcc agctgttctt gcagactctg
2220
gggcccggcg ccccccgggc ccccgctctg ctgcggaggc gccgagggga gctggggacc
2280
gcctgggtcc gagaccgtgt tgacatccag agcgccctacc ccttcagat cctcctggcc
2340
gggcagacag gcccgggggg cgctgtgggt ctggacgacc tcctcctgtc tgaccactgc
2400

agaccagtct cggaggtgtc caccctgcag ccgtgcctc ctgggccccg ggccccagcc
2460
ccccagcccc tgccgcccag ctcgcggtc caggattcct gcaagcaggg gcatcttgcc
2520
tgcggggacc tgtgtgtgcc cccggaacaa ctgtgtgact tcgaggagca gtgcgcaggg
2580
ggcgaggacg agcaggcctg tggcaccaca gactttgagt cccccagggc tgggggctgg
2640
gaggacgcca gcgtggggcg gctgcagtgg cggcgtgtct cagcccagga gagccagggg
2700
tccagtgcag ctgctgctgg gcacttcctg tctctgcagc gggcctgggg gcagctaggg
2760
gctgaggccc gggtcctcac acccctcctt ggcccttctg gcccagctg tgaactccac
2820
ctggcttatt atttacagag ccagccccga gctggatttg tcggtttggg ggacttggat
2880
ggcctgacc agcagnggag ctggggtgga caacgtgacc ctgagggact gtagccccac
2940
agtgaccacc gagagagaca gaggttcctg ctgcccaccc tcaactccac ctgggtgctc
3000
cccttacact cctccagggg ccccgagct tccaccttct cagggtctctg gagggggagg
3060
ggagaagggtg tgtgacgcca cctggcccca ccccagagg tctcctgtaa ctttgagcgg
3120
gacacatgca gctggtaccc aggccacctc tcagacacac actggcgctg ggtggagagc
3180
cgcgccctg accacgacca caccacaggc caaggccact ttgtgctcct ggacccccaca
3240
gacccctgg cctggggcca cagtgccac ctgctctcca ggccccaggt gccagcagca
3300
cccacggagt gtctcagctt ctggtaccac ctccatgggc cccagattgg gactctgcgc
3360
ctagccatga gacgggaagg ggaggagaca cacctgtggt cgcggtcagg caccagggc
3420
aaccgctggc acgaggcctg ggccaccctt tcccaccagc ctggctcca tgcccagtac
3480
cagctgctgt tcgagggcct cgggacgga taccacggca ccatggcgct ggacgatgtg
3540
gccgtgcggc cgggcccctg ctgggcccct aattactgct cctttgagga ctcagactgc
3600
ggcttctccc ctggaggcca aggtctctgg aggcggcagg ccaatgcctc gggccatgct
3660
gcctggggcc cccaacaga ccataccact gagacagccc aagggcacta catggtggtg
3720
gacacaagcc cagacgcact accccggggc cagacggcct ccctgacctc caaggagcac
3780
aggccctgg cccagcctgc ttgtctgacc ttctggtacc acgggagcct ccgcagccca
3840
ggcaccctgc gggctctacct ggaggagcgc gggaggcacc aggtgctcag cctcagtgc
3900
cacggcgggc ttgcctggcg cctgggcagc atggacgtgc aggcagagcg agcctggagg
3960
ngttcctgtg attttgagtc tggcctgtgt ggctggagcc acctggccgg gcccggcctg
4020

ggcgataca gctgggactg gggcggggga gccacccct ctcgttaccc ccagccccct
 4080
 gtggaccaca ccctgggcac agaggcaggc cactttgcct tctttgaaac tggcgtgctg
 4140
 ggccccgggg gccgggcccgc ctggctgcgc agcgagcctc tgccggccac cccagcctcc
 4200
 tgccctccgt tctggtacca catgggtttt cctgagcact tctacaaggg ggagctgaag
 4260
 gtactgctgc acagtgtca gggccagctg gctgtgtggg gcgcaggcgg gcatcggcgg
 4320
 caccagtggc tggaggccca ggtggaggta gccagtgccca aggagtcca gatcgtgttt
 4380
 gaagccactc tgggcggcca gccagccctg gggccattg ccctggatga cgtggagtat
 4440
 ctggctgggc agcattgccca gcagcctgcc cccagcccgg ggaacacagc cgcacccggg
 4500
 tctgtgccag ctgtggttgg cagtgcctc ctattgtca tgctcctggg gctgtggga
 4560
 cttgggggac ggcgtggct gcagaagaag gggagctgcc cctccagag caacacagag
 4620
 gccacagccc ctggctttga caacatcctt ttcaatgcgg atggtgtcac cctcccggca
 4680
 tctgtcacca gtgatccgta gaccaccca gacaaggccc cgttcctca cgtgacatcc
 4740
 agcacttggc cagaccctag ccagggaccg gacacctgcc ccgcccaggc tgggacaggc
 4800
 tgcaggtctc aggatatgct gaggcctggg cgttcctgc cctgtgctga ctctgttgc
 4860
 ctgtgaataa acaccctggc ccatgagggc agccccaaaa aaaaaaaaaa aaaaaaaaaa
 4920
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 4949

<210> 5088

<211> 465

<212> PRT

<213> Homo sapiens

<400> 5088

Gly	Ser	Gly	Thr	Thr	Arg	Pro	Leu	Glu	Val	His	Pro	Gly	Pro	Pro	Arg
1				5				10					15		
Leu	Val	Gly	Gly	Ala	Gln	Gly	Glu	Gly	Gly	Trp	Ala	Ala	Gly	Asp	Lys
		20					25						30		
Gln	Gly	Arg	Ser	Cys	Pro	Gly	Thr	Pro	Asp	Ile	Ala	Asp	Val	Ala	Glu
		35				40						45			
Leu	Arg	Val	Glu	Leu	Thr	His	Gly	Ala	Glu	Thr	Leu	Thr	Leu	Trp	Gln
	50				55				60						
Ser	Thr	Gly	Pro	Trp	Xaa	Pro	Trp	Xaa	Trp	Gln	Glu	Leu	Ala	Val	Thr
65				70				75						80	
Thr	Gly	Arg	Ile	Arg	Gly	Asp	Phe	Arg	Val	Thr	Phe	Ser	Ala	Thr	Arg
			85				90						95		
Asn	Ala	Thr	His	Arg	Gly	Ala	Val	Ala	Leu	Asp	Asp	Leu	Glu	Phe	Trp
		100				105						110			
Asp	Cys	Gly	Leu	Pro	Thr	Pro	Gln	Ala	Asn	Cys	Pro	Pro	Gly	His	His

```

      115              120              125
His Cys Gln Asn Lys Val Cys Val Glu Pro Gln Gln Leu Cys Asp Gly
      130              135              140
Glu Asp Asn Cys Gly Asp Leu Ser Asp Glu Asn Pro Leu Thr Cys Gly
145              150              155              160
Arg His Ile Ala Thr Asp Phe Glu Thr Gly Leu Gly Pro Trp Asn Arg
      165              170              175
Ser Glu Gly Trp Ser Arg Asn His Arg Ala Gly Gly Pro Glu Arg Pro
      180              185              190
Ser Trp Pro Arg Arg Asp His Ser Arg Asn Ser Ala Xaa Arg Leu Val
      195              200              205
Phe Tyr Gln Tyr Leu Ser Gly Ser Glu Ala Gly Cys Leu Gln Leu Phe
      210              215              220
Leu Gln Thr Leu Gly Pro Gly Ala Pro Arg Ala Pro Val Leu Leu Arg
225              230              235              240
Arg Arg Arg Gly Glu Leu Gly Thr Ala Trp Val Arg Asp Arg Val Asp
      245              250              255
Ile Gln Ser Ala Tyr Pro Phe Gln Ile Leu Leu Ala Gly Gln Thr Gly
      260              265              270
Pro Gly Gly Val Val Gly Leu Asp Asp Leu Ile Leu Ser Asp His Cys
      275              280              285
Arg Pro Val Ser Glu Val Ser Thr Leu Gln Pro Leu Pro Pro Gly Pro
      290              295              300
Arg Ala Pro Ala Pro Gln Pro Leu Pro Pro Ser Ser Arg Leu Gln Asp
305              310              315              320
Ser Cys Lys Gln Gly His Leu Ala Cys Gly Asp Leu Cys Val Pro Pro
      325              330              335
Glu Gln Leu Cys Asp Phe Glu Glu Gln Cys Ala Gly Gly Glu Asp Glu
      340              345              350
Gln Ala Cys Gly Thr Thr Asp Phe Glu Ser Pro Glu Ala Gly Gly Trp
      355              360              365
Glu Asp Ala Ser Val Gly Arg Leu Gln Trp Arg Arg Val Ser Ala Gln
      370              375              380
Glu Ser Gln Gly Ser Ser Ala Ala Ala Ala Gly His Phe Leu Ser Leu
385              390              395              400
Gln Arg Ala Trp Gly Gln Leu Gly Ala Glu Ala Arg Val Leu Thr Pro
      405              410              415
Leu Leu Gly Pro Ser Gly Pro Ser Cys Glu Leu His Leu Ala Tyr Tyr
      420              425              430
Leu Gln Ser Gln Pro Arg Ala Gly Phe Val Gly Leu Val Asp Leu Asp
      435              440              445
Gly Pro Asp Gln Gln Xaa Ser Trp Gly Gly Gln Arg Asp Pro Glu Gly
      450              455              460
Leu
465

```

<210> 5089

<211> 793

<212> DNA

<213> Homo sapiens

<400> 5089

nctgaccaca tctccgacga tccccacacc ttcaaccacc agaacttgac ccactgttcc
60

cgccatggct cagggcctaa catcatcctc acaggggact cctctccagg tttctctaag
 120
 gagattgcag cagccctggc cggagtgcct ggctttgagg tgtcagcagc tggattggag
 180
 ctagggcttg ggctagaaga tgagctgcgc atggagccac tgggcctgga agggctaaac
 240
 atgctgagtg acccctgtgc cctgctgcct gatcctgctg tggaggagtc attccgcagt
 300
 gaccggctcc aatgagggca cctcatcacc atccctcttc ttggcccat cccccaccac
 360
 cattcctttc ctcccttccc cctggcaggt agagactcta ctctctgtcc ccagatcctc
 420
 tttctagcat gaatgaagga tgccaagaat gagaaaaagc aaggggtttg tccaggtggc
 480
 ccctgaattc tgcgcaaggg atgggcctgg gggaactcaa gggagggcct aaagcacttg
 540
 taactttgaa ccgtctgtct ggaggtcaga gcctgttgga aagcaggggt agaggggagc
 600
 cctggaagca gggcttttcc ggatgcctag gggtagggcag tgccagcccc tcctcaccac
 660
 tcttccccctt gcagtggagg agagagccag agtggatact attttttatt aaatatatta
 720
 ttatatgtta ataaaaaat catatcaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 780
 aaaaaaaaaa aaa
 793

<210> 5090
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 5090
 Xaa Asp His Ile Ser Asp Asp Pro His Thr Phe Asn His Gln Asn Leu
 1 5 10 15
 Thr His Cys Ser Arg His Gly Ser Gly Pro Asn Ile Ile Leu Thr Gly
 20 25 30
 Asp Ser Ser Pro Gly Phe Ser Lys Glu Ile Ala Ala Ala Leu Ala Gly
 35 40 45
 Val Pro Gly Phe Glu Val Ser Ala Ala Gly Leu Glu Leu Gly Leu Gly
 50 55 60
 Leu Glu Asp Glu Leu Arg Met Glu Pro Leu Gly Leu Glu Gly Leu Asn
 65 70 75 80
 Met Leu Ser Asp Pro Cys Ala Leu Leu Pro Asp Pro Ala Val Glu Glu
 85 90 95
 Ser Phe Arg Ser Asp Arg Leu Gln
 100

<210> 5091
 <211> 3150
 <212> DNA
 <213> Homo sapiens

<400> 5091

ggactcaggt cctcggggat accatcccc gacctcacct tccacctacc gcagcctgct
60
agcctttccg ggagaaaagg catccttacc tctgggtgaa ggtctcgggg cctccccctc
120
tgcattccga ccctctcccc atcccagcct cccatgccaa ggcccgcctt gtcagtcaact
180
tccttttgtc atcggttgg caaacgggag agaaaacaga gcttcatggg aaacagcggc
240
aacagtgggt ccatacacc tttccccaag ttggagctag gcctggggcc ccagcccatg
300
gcgccccggg agctccctac ctgctccatc tgcctggaga ggttgcgga ccccatctcg
360
ctggactgtg gccacgactt ctgcatacgg tgcttcagca cacaccgtct cccgggctgt
420
gagccgcct gctgtcctga gtgccgaag atatgcaagc agaagagggg cctccggagc
480
ctgggcgaga agatgaagct cctgccgcag cggccgctgc ccctgcact gcaggagacg
540
tgtcctgtga gggcggagcc gctgctgctg gttcgcatca atgcctctgg gggcctcatc
600
cttaggatgg gggccatcaa ccgctgcctg aagcaccctc tggccaggga cccccagtc
660
tgctcctcg ctgtcctggg ggagcagcac tcagggaagt ccttctcct caaccatttg
720
cttcagggt tgccgggcct ggagtctggt gaggggcgcc ggccaagagg aggagaggca
780
tcctcgagg gctgcaggtg gggcgccaat ggcctcgccg ggggcatatg gatgtggagc
840
cacccttct tgctggggaa agaagggaag aagggtggcg tgctcctggt ggacacaggg
900
gatgccatga gccctgagct gagcaggga acaaggatca agctctgtgc tctcaccacg
960
atgctgagct cctaccagat cctcagcacc tcccaggagc tgaaggatac agacctggac
1020
tatctggaga tgtttgtcca cgtggccgag gtgatgggca agcattatgg gatggtgcca
1080
atccagcatc tggacctctt agttcgtgac tcatcccacc ccaacaaggc agggcagggg
1140
catgtaggca acatcttcca gagattgtct ggcagatacc ccaaggtgca ggagctgctg
1200
caagggaagc gagcccggtg ctgcctcttg cctgccccag ggaggcggcg gatgaaccaa
1260
ggccatgcaa gccctggtgg tgacacagat gatgacttcc gccaccttct gggggcctac
1320
gtctcagatg tgctgagtgc ggccccccag cagcctaaga gccgctgcca ggggtactgg
1380
aacgaggggc gcgccgtggc caggggggac agacgcctac tcacggggca gcagctagct
1440
caggaaatca agaacctctc aggatggatg gggaggacag ggcccggttt cacctctccg
1500
gatgagatgg ctgctcagct gcacgacctg aggaaggtgg aagctgcaa gagggagttc
1560
gaggagtatg tgaggcagca ggacgtagcc accaagcgca tattctctgc gctgcgggtc
1620

ctgccagaca ccatgcggaa cctcctctcc acccagaaag atgccattct ggcccgccat
1680
ggtgtggcct tactctgcaa ggggagagat cagaccttgg aggcactgga agctgagctg
1740
caggccacgg ccaaggcctt catggactcc tacacgatgc gcttctgtgg ccacctagct
1800
gctgtggggg gtgctgtggg ggccgggctc atgggcctgg cagggggcgt ggtgggtgct
1860
ggcatggcag cagctgcact ggctgcagag gctgggatgg tggctgctgg agctgccgtg
1920
ggggccacag gggccgctgt ggttgggggt ggcgtgggtg ctgggttggc tgccacagtg
1980
ggctgcatgg agaaggagga ggatgagagg cttctggaag gggaccgaga gccccttctc
2040
caggaagagt aacagcccca ggaggtattg aaggacagga gagatgtcag gtggggatga
2100
agaagagggg caggtcgggg gaggggtgatg ccagggattc caaggcaccg ccatgtactg
2160
cactgccctg gtcgaatgct cgggtgtctgg gtggcagctg agctgggact caagggtggct
2220
cttggaacct gggaggcagc atctgggggc agtggataga acaccggcc tgtttctggg
2280
tgcagatggt tgccgatctg cccttgtcac agataggcta catcccaggg tttctggctg
2340
caagtgtgag tccacctcc ccacctggct catttccccg atgacctgg attgtaggaa
2400
agttaagcag gcaccatcct ggaagtctac ccctaggtgg tcgagagacc tgttctttca
2460
cagatgtgag aagccccagg atgattgacc atggtgttca ggagcgggga gcaactgatga
2520
ggtgctgggg atgacaggaa ggaaggaaca ctgggcagaa ccagagagat gggacatggt
2580
agactgtggc ccagacccca gagcagagaa acttgttccc atgacccttc ccaaactctgc
2640
tccagcagga ctaagggtggc tttcccactc ctggcccaca gcccagaga gcctgtctgt
2700
gcatcctgaa cactctttg ctgggcctcc gcaaggcct ctctgggtc tgtgtccttt
2760
ttcaagcctg tttagatggg ggagtgccca tgccctctgt gaagtgccca aatgcgaaag
2820
aataacacct tttcttgcct tctgagctaa gccagacagc ctttatacta gattctatca
2880
aaatcttgca aaggaaaaca aaatgaacaa cttctaccct taaacacatc ctttctcccc
2940
tgggcttgta agaagatgca gcttgatgca gtcctcaaa caccaggccc cctgggaact
3000
gggggtgcgg gagttctccc tctgggggac agaaaatctg actactagga agacttctag
3060
gctatgaaac tgacttctag gctatgaaac ttacagggtg tgggtgggca cattatcctt
3120
tattttatga aaaataaaat gtgtgtatgt
3150

<210> 5092

<211> 632
 <212> PRT
 <213> Homo sapiens

<400> 5092
 Met Pro Arg Pro Ala Leu Ser Val Thr Ser Phe Cys His Arg Leu Gly
 1 5 10 15
 Lys Arg Glu Arg Lys Gln Ser Phe Met Gly Asn Ser Gly Asn Ser Trp
 20 25 30
 Ser His Thr Pro Phe Pro Lys Leu Glu Leu Gly Leu Gly Pro Gln Pro
 35 40 45
 Met Ala Pro Arg Glu Leu Pro Thr Cys Ser Ile Cys Leu Glu Arg Leu
 50 55 60
 Arg Asp Pro Ile Ser Leu Asp Cys Gly His Asp Phe Cys Ile Arg Cys
 65 70 75 80
 Phe Ser Thr His Arg Leu Pro Gly Cys Glu Pro Pro Cys Cys Pro Glu
 85 90 95
 Cys Arg Lys Ile Cys Lys Gln Lys Arg Gly Leu Arg Ser Leu Gly Glu
 100 105 110
 Lys Met Lys Leu Leu Pro Gln Arg Pro Leu Pro Pro Ala Leu Gln Glu
 115 120 125
 Thr Cys Pro Val Arg Ala Glu Pro Leu Leu Leu Val Arg Ile Asn Ala
 130 135 140
 Ser Gly Gly Leu Ile Leu Arg Met Gly Ala Ile Asn Arg Cys Leu Lys
 145 150 155 160
 His Pro Leu Ala Arg Asp Thr Pro Val Cys Leu Leu Ala Val Leu Gly
 165 170 175
 Glu Gln His Ser Gly Lys Ser Phe Leu Leu Asn His Leu Leu Gln Gly
 180 185 190
 Leu Pro Gly Leu Glu Ser Gly Glu Gly Gly Arg Pro Arg Gly Gly Glu
 195 200 205
 Ala Ser Leu Gln Gly Cys Arg Trp Gly Ala Asn Gly Leu Ala Gly Gly
 210 215 220
 Ile Trp Met Trp Ser His Pro Phe Leu Leu Gly Lys Glu Gly Lys Lys
 225 230 235 240
 Val Ala Val Phe Leu Val Asp Thr Gly Asp Ala Met Ser Pro Glu Leu
 245 250 255
 Ser Arg Glu Thr Arg Ile Lys Leu Cys Ala Leu Thr Thr Met Leu Ser
 260 265 270
 Ser Tyr Gln Ile Leu Ser Thr Ser Gln Glu Leu Lys Asp Thr Asp Leu
 275 280 285
 Asp Tyr Leu Glu Met Phe Val His Val Ala Glu Val Met Gly Lys His
 290 295 300
 Tyr Gly Met Val Pro Ile Gln His Leu Asp Leu Leu Val Arg Asp Ser
 305 310 315 320
 Ser His Pro Asn Lys Ala Gly Gln Gly His Val Gly Asn Ile Phe Gln
 325 330 335
 Arg Leu Ser Gly Arg Tyr Pro Lys Val Gln Glu Leu Leu Gln Gly Lys
 340 345 350
 Arg Ala Arg Cys Cys Leu Leu Pro Ala Pro Gly Arg Arg Arg Met Asn
 355 360 365
 Gln Gly His Ala Ser Pro Gly Gly Asp Thr Asp Asp Asp Phe Arg His
 370 375 380
 Leu Leu Gly Ala Tyr Val Ser Asp Val Leu Ser Ala Ala Pro Gln His

[illegible]

<210> 5093

<211> 1662

<212> DNA

<213> Homo sapiens

<400> 5093

nggctaggtg cgctgcgagc gcgcgcggac cgcgcacagg cggcggagcc ggtatgggcc
60

cgcctggccc tgggcgcgcg gccgcacgag caccagccta gagccaggtt tggttttcag
120

gactgaagct tcaagatggc tgaccaggac cctgcgggca tcagccccct ccagcaaattg

gtggcctcag gcaccggggc tgtggttacc tctctcttca tgacaccctt ggacgtggtg

210
aagggttcgcc tgcagttctca gcggccctcc atggccagcg agctgatgcc ttctctcaga
300

ctgtggagcc tctcctatac caaattgcc tccctctcct ataccaaatg gaagtgcctc
360

ctgtattgca atggtgtcct ggagcctctg tacctgtgcc caaatggcgc ccgctgtgcc

acctgggttc aagaccctac ccgcttcact ggcaccatgg atgccttcgt gaagatcgtg

aggcacgagg gcaccaggac cctctggagc ggcctccccg ccaccctggt gatgactgtg
 540
 ccagctaccg ccactactt cactgcctat gaccaactga aggccttcct gtgtgggtga
 600
 gccctgacct ctgacctcta cgcacccatg gtggctggcg cgctggcccg cctgggcacc
 660
 gtgactgtga tcagccccct ggagcttatg cggacaaagc tgcaggctca gcatgtgtcg
 720
 taccgggagc tgggtgcctg tgttcgaact gcagtggctc aggggtggctg gcgctcactg
 780
 tggctgggct ggggccccac tgccttcga gatgtgcctt tctcagtga tccccaccc
 840
 caagccctgt actggttcaa ctatgagctg gtgaagagct ggctcaatgg gctcaggccg
 900
 aaggaccaga cttctgtggg catgagcttt gtggctgggtg gcatctcagg gacggtggct
 960
 gcagtgtga ctctaccctt tgacgtggta aagacccaac gccaggctcg tctgggagcg
 1020
 atggaggctg tgagagtga cccctgcat gtggactcca cctggctgct gctgcggagg
 1080
 atccgggccc agtcgggcac caagggactc tttgcaggct tccttcctcg gatcatcaag
 1140
 gctgccccct cctgtgccat catgatcagc acctatgagt tcggcaaaag cttcttcag
 1200
 aggctgaacc aggaccggct tctgggcggc tgaaaggggc aaggaggcaa ggaccccgct
 1260
 tctccacgg atggggagag ggcaggagga gaccagcca agtgcctttt cctcagcact
 1320
 gagggagggg gcttgtttcc cttccctccc ggcgacaagc tccagggcag ggctgtccct
 1380
 ctgggcggcc cagcacttcc tcagacacaa cttcttcctg ctgctccagt cgtggggatc
 1440
 atcacttacc cccccccaa gttaagacc aaatcttcca gctgccccct tcgtgtttcc
 1500
 ctgtgtttgc tgtagctggg catgtctcca ggaaccaaga agccctcagc ctggtgtagt
 1560
 ctcctgacc cttgttaatt ccttaagtct aaagatgatg aacttcaaaa aaaaaaaaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1662

<210> 5094

<211> 365

<212> PRT

<213> Homo sapiens

<400> 5094

Met	Ala	Asp	Gln	Asp	Pro	Ala	Gly	Ile	Ser	Pro	Leu	Gln	Gln	Met	Val
1				5					10					15	
Ala	Ser	Gly	Thr	Gly	Ala	Val	Val	Thr	Ser	Leu	Phe	Met	Thr	Pro	Leu
			20					25					30		
Asp	Val	Val	Lys	Val	Arg	Leu	Gln	Ser	Gln	Arg	Pro	Ser	Met	Ala	Ser
			35				40					45			
Glu	Leu	Met	Pro	Ser	Ser	Arg	Leu	Trp	Ser	Leu	Ser	Tyr	Thr	Lys	Leu

50	55	60
Pro Ser Leu Ser Tyr Thr Lys Trp Lys Cys Leu Leu Tyr Cys Asn Gly		
65	70	75
Val Leu Glu Pro Leu Tyr Leu Cys Pro Asn Gly Ala Arg Cys Ala Thr		80
	85	90
Trp Phe Gln Asp Pro Thr Arg Phe Thr Gly Thr Met Asp Ala Phe Val		95
	100	105
Lys Ile Val Arg His Glu Gly Thr Arg Thr Leu Trp Ser Gly Leu Pro		110
	115	120
Ala Thr Leu Val Met Thr Val Pro Ala Thr Ala Ile Tyr Phe Thr Ala		125
	130	135
Tyr Asp Gln Leu Lys Ala Phe Leu Cys Gly Arg Ala Leu Thr Ser Asp		140
145	150	155
Leu Tyr Ala Pro Met Val Ala Gly Ala Leu Ala Arg Leu Gly Thr Val		160
	165	170
Thr Val Ile Ser Pro Leu Glu Leu Met Arg Thr Lys Leu Gln Ala Gln		175
	180	185
His Val Ser Tyr Arg Glu Leu Gly Ala Cys Val Arg Thr Ala Val Ala		190
	195	200
Gln Gly Gly Trp Arg Ser Leu Trp Leu Gly Trp Gly Pro Thr Ala Leu		205
	210	215
Arg Asp Val Pro Phe Ser Val His Pro Pro Pro Gln Ala Leu Tyr Trp		220
225	230	235
Phe Asn Tyr Glu Leu Val Lys Ser Trp Leu Asn Gly Leu Arg Pro Lys		240
	245	250
Asp Gln Thr Ser Val Gly Met Ser Phe Val Ala Gly Gly Ile Ser Gly		255
	260	265
Thr Val Ala Ala Val Leu Thr Leu Pro Phe Asp Val Val Lys Thr Gln		270
	275	280
Arg Gln Val Ala Leu Gly Ala Met Glu Ala Val Arg Val Asn Pro Leu		285
	290	295
His Val Asp Ser Thr Trp Leu Leu Leu Arg Arg Ile Arg Ala Glu Ser		300
305	310	315
Gly Thr Lys Gly Leu Phe Ala Gly Phe Leu Pro Arg Ile Ile Lys Ala		320
	325	330
Ala Pro Ser Cys Ala Ile Met Ile Ser Thr Tyr Glu Phe Gly Lys Ser		335
	340	345
Phe Phe Gln Arg Leu Asn Gln Asp Arg Leu Leu Gly Gly		350
	355	360
		365

<210> 5095

<211> 2230

<212> DNA

<213> Homo sapiens

<400> 5095

tttttttttg gtataaatac ttattataag aaatattgtc attttcgtta aaaaatacat
 60

tagagaagag agttttgggt taccagtctt tcttcacaga atcacagtgt aagatattca
 120

tttcttgacg tctctaggaa ccttcaggcc acggatcagc agaacatata cgaacaaggg
 180

aaaaaaattc ctcttaattt tactgatggc cccccgtctc tcaggtgggc tgagagtggc
 240

acttggtaaa cagtgtgtgt ttaatccagc ctctgcctct gactaccttt aagaccagga
300
ctcgaagcag agtgagaggg ctcctccac ccacctggg gcgagtgaag acacagctta
360
cagaggcggt caaagtagtg acgcagttag gtctgaatga acacggagga ttttattact
420
caccattaat ggtagtgaat tgcccttcgg tggataccat caggtgaggt agggaagaca
480
ttccagagga aatctgttaa tggggcaacg tttttatttc tgtacattta catacaaatt
540
ttccccaag gtacaacaga tgcgacacca tgcagacag cagctgtgaa cgacagttca
600
gaactcagcg taagcttgtg ctatgaacga gcaccgtcag agaattccca cccacagta
660
cagaaacaca gtttttatat tacaacctca aggacagagg gagggaagtg ttcgccgcta
720
gacatgacac accatactgc ttttccaaaa cacacgggac atgaaagcga ggtggtgcct
780
tctagacgag aggacagctg tagtgtgggc ctcctccgca catgcgatac ctggggccg
840
gcggtgtgac gtcacaggcc cacttacggc acttgcagtt tgggattgct catttggtc
900
taggaagtgg tgggtgtctga gtgcgatact tcccttacga ggtttgtttt tgttttttt
960
ctgttctgta gccaaaccaa tttaccagcc cgtcttccag atgcaggtga tcttactctc
1020
agtaaaaaa aacatgtaac ctttttctctg tttctcttgg gtggaataa ttttagggca
1080
tttgataaga gtttgacttc agaaaaagaa caaagtgaag aaatgttcag ctccatctca
1140
ggtgttcaca tttgtgcata acttttattg aaaggctgac agggtaggct agcggaacgg
1200
aggggtgtgt ggaggagagt agcagggggg gggagggtca agttgaaaca gtgggtgcct
1260
gcgaagggtc tccctattag ccaggaaggg aacagcacag aggggttcaa gctgacaga
1320
cgggtgctgg aagtgggcag ccgtagcagc ctccctgct gagcccggcg ggcccagatg
1380
cgtatcaggg ttgggtgggt cctgccacct tgctcacttg gtaccggatt tccggggct
1440
gtgcccacag ggaagtgttg ctgctctggc aacatttcat aaaggtgttg ctcaacagct
1500
tcaggtatcc ctaggctgaa gctgccacca aacaggcacc cggcctctc ctctcaggg
1560
tgccctggga ggagagctgt gggaccgct cggcggtga gagccattac ctgccagcg
1620
tcggcaagtc agcctcactc acaccactg gactctgctc ccaagagccc aggtgtttt
1680
cctcaaagct agcctctttt ccagtcacg atggattagt cctgatggct gaagtgtga
1740
gcagtgtctt cgttggaaca gttttttatt gtcatttgag gtggagatca gagatcatga
1800
ccagaagagt gtgagtgtg tcccttgcca ccaacttctc agagatttcg ggcagcactc
1860

tacagcttca atttccaaaa aaaaaaaagt ttacacgacc agtgagactg ctcgcaactt
 1920
 tcatcactta gcatatcctt ccacaacaca gtacagtaag tggactgcag ggtggcctgg
 1980
 tgctgagggg gatgggtgca gacgtacacc tgtccaggtg caggctcagg ggcctcgctg
 2040
 gatccttccc accttcccca actgcctact ggcctggcta ctggataggt cctattctgt
 2100
 acataatggg gggttggtga cagggtggctt tatagcaagt actccaaaaa aggtaaaagg
 2160
 aatttcacaa gtttggcacg caaaggctgc acagatctaa agaaaggcct ttgtaaagg
 2220
 gaatgcaaac
 2230

<210> 5096
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 5096
 Met Ala Leu Ser Arg Arg Gly Gly Pro Thr Ala Leu Leu Pro Gly Gln
 1 5 10 15
 Pro Glu Glu Glu Glu Ala Gly Cys Leu Phe Gly Gly Ser Phe Ser Leu
 20 25 30
 Gly Ile Pro Glu Ala Val Glu Gln His Leu Tyr Glu Met Leu Pro Glu
 35 40 45
 Gln Gln His Phe Pro Val Gly Thr Ala Pro Gly Asn Pro Val Pro Ser
 50 55 60
 Glu Gln Gly Gly Arg Thr His Pro Ser Leu Ile Arg Ile Trp Ala Arg
 65 70 75 80
 Arg Ala Gln Gln Gly Arg Leu Leu Arg Leu Pro Thr Ser Gln His Arg
 85 90 95
 Leu Ser Gly Leu Asn Pro Ser Val Leu Phe Pro Ser Trp Leu Ile Gly
 100 105 110
 Arg Pro Phe Ala Gly Thr His Cys Phe Asn Leu Thr Leu Pro Pro Pro
 115 120 125
 Ala Thr Leu Leu His Thr Pro Leu Arg Ser Ala Ser Leu Pro Cys Gln
 130 135 140
 Pro Phe Asn Lys Ser Tyr Ala Gln Met
 145 150

<210> 5097
 <211> 3074
 <212> DNA
 <213> Homo sapiens

<400> 5097
 tttttttttt tttttttttt tttttttttt tttttttttt ttttctaaca cttatgcatt
 60
 tattttcatg tgtaagaaga aaaacataac tagcacgtga acatgactgc atggatacac
 120
 ggctcagcac gaggctaaag tcagaagtga gtgaaaacaa aatagcatgt tgatttaagt
 180

gaaataacag aacaggaggc ctttggttat aacaattgtg gaggtggtct gtgaatgcag
240
aagttcggga ctccctgctc taggctcagg gcaagacgct gtggtctggg ccgaagcccc
300
tggtggttcta cagagaagcc tgcccagtcg acggccccctg tggcattctc gtgggagcgt
360
gtgagacccc agggaggga gacattctg tttaacttgt ccgtgccgta caaatgtct
420
tagaagtgat aaagcaacaa tgatgattct cttcaaagg gaagaagaat cttccagggtg
480
tggtcttgag gacgcagagg ttacaacaca ggctgggctg cagggcccaa gtaggacttg
540
aggtcataac cagaggactg aaggacacc tgtcctggca ccatactgga gaagtgttg
600
tttgtgttg ggggagagg ggtgcatggc ccaagtcaag gctgaaggag gaacgcttg
660
cccctgcacc ctgttcccag catataccag gctctcacc catgcctgct gactcaacac
720
agcaccggg aggtgccgc agaaggcagg tcgggggatg ctgacatccc ggggtgtctg
780
cggaccaccc tctctcttg ggtctgggc ctggccccc tttgcaccac acattccagg
840
gcggggaagt ccatggctgt gcccactg ggtccattc ctgtacatgt gcgaaccaag
900
gggtgtgttg ctattatgct cccactaaa tccaaagaat gttggtccc atcatttcaa
960
cctcaacatt ttcaaaaagc actttttttt ttggagacag agtctcgctg tgtctcccag
1020
gctggagtgc agcgggtga tctcagctca ctgcaacctc tgctcctgg gttcaagcaa
1080
ttctcctgcc tcagcctccc gagtagctgg gattacaggt gcgtgccacc acaccagct
1140
aatttttgta ttttagtag aaacggggtt tcaccacatt ggccaggctg gtcttgaact
1200
cctgacctca agtgatctgc ctgccttggc ctcccaaagt gctgggatta caggcatgag
1260
ccaccatgcc cggcctaaaa gcactttttt tttttttgag acggagtctt cctcttgtg
1320
cccaggctgg aatgcaatgg tgcaatctca nnctgcaacc tctgccttcc agattgaagc
1380
aattctcctg cctcagcttc ccagtagct gggattacag gcacctgcta ccatgcctgg
1440
ctaatttttg tatttttagt agagacaggg ttccaccatg ttggccaggc tggctctgaa
1500
ctcctgacct caggatgcc acccaccttg gcctccaaa gtgctgggat tacaagcgtg
1560
agccaccatg ccagcctct aaaaggcact ttttaaggga ccttgagtt tgcctcaaa
1620
cagctcaacc ccacaggcga ggctggctct agcacccta ccagacagct agtcagtga
1680
aggggtccaa cctccccag ctttccctg gaagtggggc agggtcagca ggggaattctg
1740
ggggtgaagc tcatggtcca ggagccttct ggtgccaga gggtagagga gtggaaggcc
1800

tgggggtgct cagccccact gtatcctgga caggctgggc cggcttgag gctgggtctcc
 1860
 atggaggctc agaaggaaag tgtgcaagag cagggttagga agggaaacca agtcagggaa
 1920
 gggccccagc cggggctagt ggtctgttca ctgccagcg ggcaactctca gcagcacccc
 1980
 gcagcactcc gcttcacatg gcatggcttg cagaagagat ggttggtcag ggggtagcag
 2040
 ccttgggtccg tgggctcgac agacaggagg atcctgcagt cctcacacct gtagcaattt
 2100
 tcatggaagt ttcttcccat gcattcgatt ttgaaggcat ctttcccatc ccgagggatg
 2160
 atgggatttt cacagatgct gcagacgggg gcgaatttcc tgtagaagtc gtccaggcag
 2220
 tacacctcgt tctggctgcc caggggcaaag ctctcatccc caatgcaccg ggcgcaggtc
 2280
 acacacgtga agcaggaggg gtggaaggcc tggccagggg ccctgatgat gtgggtcccg
 2340
 accacctcgc cacacttgcc gcacctctcc agtgtgtcct ggtagcaggg ttcgcagagg
 2400
 ggtcgcccat ctttctggta gaagctctgc ccagccagct ggcgggcgga ggtgtggcga
 2460
 ggtgggtccgg gaccacatca tcagggccct gggccaggcc ttccaccct cctgtttcac
 2520
 gtgtgtgacc tgcgcccgtt gcattgggga tgagagcttt gccctgggca gccagaacga
 2580
 ggtgtactgc ctggacgact tctacaggaa attcgcccc gtctgcagca tctgtgaaaa
 2640
 tcccatcatc cctcgggatg ggaaagatgc cttcaaaatc gaatgcatgg gaagaaactt
 2700
 ccatgaaaat tgctacaggt gtgaggactg caggatcctc ctgtctgtcg agcccacgga
 2760
 ccaaggctgc taccctctga acaaccatct cttctgcaag ccatgccatg tgaagcggag
 2820
 tgctgcgggg tgctgctgag agtgcccgtt gggcagtga cagaccacta gccccggctg
 2880
 gggcccttcc ctgacttggt ttcccttctt aacctgctct tgcacacttt ccttctgagc
 2940
 ctccatggag accagcctgc aagccggccc agcctgtcca ggatacagt gggctgagca
 3000
 ccccaggcc ttccactcct ctaccctctg ggcaccagaa ggctcctgga ccatgagctt
 3060
 cacccccaga attc
 3074

<210> 5098

<211> 114

<212> PRT

<213> Homo sapiens

<400> 5098

Met Ala Val Pro Gln Leu Gly Pro Ile Pro Val His Val Arg Thr Lys

1

5

10

15

Gly Val Phe Ala Ile Met Leu Pro Thr Lys Ser Lys Glu Cys Trp Phe

```

                20                25                30
Pro Ser Phe Gln Pro Gln His Phe Gln Lys Ala Leu Phe Phe Leu Glu
                35                40                45
Thr Glu Ser Arg Cys Val Ser Gln Ala Gly Val Gln Arg Gly Asp Leu
                50                55                60
Ser Ser Leu Gln Pro Leu Pro Pro Gly Phe Lys Gln Phe Ser Cys Leu
65                70                75                80
Ser Leu Pro Ser Ser Trp Asp Tyr Arg Cys Val Pro Pro His Pro Ala
                85                90                95
Asn Phe Cys Ile Phe Ser Arg Asn Gly Val Ser Pro His Trp Pro Gly
                100                105                110
Trp Ser

```

<210> 5099

<211> 801

<212> DNA

<213> Homo sapiens

<400> 5099

```

ggggccggga agggacctgg ctggggaatg agaaaacctg gggccatcgt caaccagag
60
acttgggttt gcaggtgaag ggtatcgggc cgtccatccc tctagcatgc ttctcacgac
120
ttgcatcttt acccactaga cttctgcact gaccagggg ctggagcgaa tcccagacca
180
gtcgggtac ctggtactga gtgaaggtgc agtgctggcg ggcagcaagt gtgaagacag
240
aaaaagatgg agccattaac agtcatctgg ggacctggag aatgatgagc aggcagccag
300
tgccatctct gagctggtca gcacagcctg cggtttcggt ctgcaccgcy gcatgaatgt
360
gcccttcaag cgcctgtctg gtgtgtctct cctccagtgg tctttggaga acacacactg
420
ctggtgacgg tgtcaggaca gaggtggttt gtggtgaaga ggcagaaccg aggtcgggag
480
ccattgatg tctgagcctg ccggagggcg agggtcggag aagcggattg ggtcctgggc
540
ctctgtgatg aggcaggcac acctgtcggg cttggcttgc tgctagaact agggccttct
600
gctcgccac ctcccacccc tacctggacg ggcccaggct tggggactct gagctgtgtt
660
aaggagaaca agggcaagga gacctccctt tgtgtccct cactccctaa taaacatgag
720
tctgatgttc tccaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
780
aaaaaaaaaa aaaaaaaaaa a
801

```

<210> 5100

<211> 102

<212> PRT

<213> Homo sapiens

<400> 5100

Ala Cys Arg Arg Ala Arg Val Gly Glu Ala Asp Trp Val Leu Gly Leu
 1 5 10 15
 Cys Asp Glu Ala Gly Thr Pro Val Gly Leu Gly Leu Leu Leu Glu Leu
 20 25 30
 Gly Pro Ser Ala Arg Pro Pro Pro Thr Pro Thr Trp Thr Gly Pro Gly
 35 40 45
 Leu Gly Thr Leu Ser Cys Val Lys Glu Asn Lys Gly Lys Glu Thr Ser
 50 55 60
 Leu Cys Ala Pro Ser Leu Pro Asn Lys His Glu Ser Asp Val Leu Gln
 65 70 75 80
 Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
 85 90 95
 Lys Lys Lys Lys Lys Lys
 100

<210> 5101

<211> 1711

<212> DNA

<213> Homo sapiens

<400> 5101

ggacctgctg ctggaagagc agcggcccca gccggggcca tggcgaagct gctgagctgc
 60
 gtcctaggcc cccggctcta caaaatctac cgggagaggg actctgaaag ggccccggcc
 120
 agcgtccctg agacgccaac ggcagtcact gccccccatt ccagctcctg ggatacgtac
 180
 tatcagcccc gtgccctgga gaaacatgct gacagcatcc tggcactggc ttcagtattc
 240
 tgggtccatct cttattactc ctctcccttc gccttcttct acttgtagag gaaagggtac
 300
 ttgagtttgt ccaaagtggg gccgttttct cactatgctg ggacattgct gctacttctg
 360
 gcaggtgtgg cctgcctccg aggcatggc cgctggacca acccccagta ccggcagttc
 420
 atcaccatct tggaagcaac acatcggaac cagtcttcag aaaacaagag gcagcttgcc
 480
 aactacaact ttgacttccg gagctggcca gtcgacttcc actgggaaga acccagcagc
 540
 cggaaggagt ctcgaggggg cccttcccg cggggtgtgg ccctgcttcg ccagagccc
 600
 ctgcaccggg ggacagcaga caccctctc aaccgggtta agaagctgcc ttgtcagatc
 660
 accagctacc tgggtggcgca caccctaggg cgccggatgc tgtatccagg ctctgtgtac
 720
 ctgctgcaga aggccctcat gcctgcgctg ctgcagggcc agggccgact ggtggaagag
 780
 tgtaatgggc gccgggcaaa gctgctggcc tgtgatggca atgagattga caccatgttt
 840
 gtggaccggc gggggacagc tgagccccag ggacagaagc tgggtgatctg ctgtgagggg
 900
 aatgctgggt tttatgaggt gggctgcgtc tccacgcccc tggaagctgg atattcagtc
 960

ctgggctgga atcatccagg ctttctgga agcacggggg taccattccc acagaatgag
 1020
 gccaatgccg tggatgtggt ggttcagttt gccatccacc gcctgggctt ccagcccccag
 1080
 gacattgtca tctacgcctg gtccatcggc ggcttcactg ccacgtgggc agccatgtcc
 1140
 taccagatg ttagtgccat gatcctggat gcctcctttg atgacctggt gcccttgcc
 1200
 ttgaaggtca tgccagacag ctggaggggc ctggtgacca ggaccgtgag gcagcatctc
 1260
 aatcctaaaca acgcggagca gctgtgcaga taccaggggc ctgtactgct gatccggaga
 1320
 accaaggatg agatcatcac caccacgtga gtgcgtggga atctcggccc tcaggaaccc
 1380
 cagagatggc caggaacttg tcccttctac ctctgcccac cagaaacctg ggtatctaga
 1440
 ccttctctcc taacctccag cccctccagg gtacattctt ctcaccccca gggttcctga
 1500
 ggacatcatg tccaaccgag gcaatgacct cctgctgaag ctctgcagc atcggtatcc
 1560
 ccgggtgatg gcagaggagg gtcttcgagt ggtgaggcag tggttggagg cctctcaca
 1620
 gctggaggaa gcctcaattt atagccgatg ggaggtggaa gaggactggt gtctgtctgt
 1680
 cctccgctcc taccaggcag aacacgggcc c
 1711

<210> 5102

<211> 436

<212> PRT

<213> Homo sapiens

<400> 5102

Met Ala Lys Leu Leu Ser Cys Val Leu Gly Pro Arg Leu Tyr Lys Ile
 1 5 10 15
 Tyr Arg Glu Arg Asp Ser Glu Arg Ala Pro Ala Ser Val Pro Glu Thr
 20 25 30
 Pro Thr Ala Val Thr Ala Pro His Ser Ser Ser Trp Asp Thr Tyr Tyr
 35 40 45
 Gln Pro Arg Ala Leu Glu Lys His Ala Asp Ser Ile Leu Ala Leu Ala
 50 55 60
 Ser Val Phe Trp Ser Ile Ser Tyr Tyr Ser Ser Pro Phe Ala Phe Phe
 65 70 75 80
 Tyr Leu Tyr Arg Lys Gly Tyr Leu Ser Leu Ser Lys Val Val Pro Phe
 85 90 95
 Ser His Tyr Ala Gly Thr Leu Leu Leu Leu Ala Gly Val Ala Cys
 100 105 110
 Leu Arg Gly Ile Gly Arg Trp Thr Asn Pro Gln Tyr Arg Gln Phe Ile
 115 120 125
 Thr Ile Leu Glu Ala Thr His Arg Asn Gln Ser Ser Glu Asn Lys Arg
 130 135 140
 Gln Leu Ala Asn Tyr Asn Phe Asp Phe Arg Ser Trp Pro Val Asp Phe
 145 150 155 160
 His Trp Glu Glu Pro Ser Ser Arg Lys Glu Ser Arg Gly Gly Pro Ser

```

      165      170      175
Arg Arg Gly Val Ala Leu Leu Arg Pro Glu Pro Leu His Arg Gly Thr
      180      185      190
Ala Asp Thr Leu Leu Asn Arg Val Lys Lys Leu Pro Cys Gln Ile Thr
      195      200      205
Ser Tyr Leu Val Ala His Thr Leu Gly Arg Arg Met Leu Tyr Pro Gly
      210      215      220
Ser Val Tyr Leu Leu Gln Lys Ala Leu Met Pro Ala Leu Leu Gln Gly
      225      230      235      240
Gln Ala Arg Leu Val Glu Glu Cys Asn Gly Arg Arg Ala Lys Leu Leu
      245      250      255
Ala Cys Asp Gly Asn Glu Ile Asp Thr Met Phe Val Asp Arg Arg Gly
      260      265      270
Thr Ala Glu Pro Gln Gly Gln Lys Leu Val Ile Cys Cys Glu Gly Asn
      275      280      285
Ala Gly Phe Tyr Glu Val Gly Cys Val Ser Thr Pro Leu Glu Ala Gly
      290      295      300
Tyr Ser Val Leu Gly Trp Asn His Pro Gly Phe Ala Gly Ser Thr Gly
      305      310      315      320
Val Pro Phe Pro Gln Asn Glu Ala Asn Ala Met Asp Val Val Val Gln
      325      330      335
Phe Ala Ile His Arg Leu Gly Phe Gln Pro Gln Asp Ile Val Ile Tyr
      340      345      350
Ala Trp Ser Ile Gly Gly Phe Thr Ala Thr Trp Ala Ala Met Ser Tyr
      355      360      365
Pro Asp Val Ser Ala Met Ile Leu Asp Ala Ser Phe Asp Asp Leu Val
      370      375      380
Pro Leu Ala Leu Lys Val Met Pro Asp Ser Trp Arg Gly Leu Val Thr
      385      390      395      400
Arg Thr Val Arg Gln His Leu Asn Leu Asn Asn Ala Glu Gln Leu Cys
      405      410      415
Arg Tyr Gln Gly Pro Val Leu Leu Ile Arg Arg Thr Lys Asp Glu Ile
      420      425      430
Ile Thr Thr Thr
      435

```

<210> 5103

<211> 1982

<212> DNA

<213> Homo sapiens

<400> 5103

```

tttttttttt ttgacacaat tcagctttat ttttacttaa ttataacaat ttttaaaaac
60
tccatgactt tgtgctattt ctaatattta aataaaaaaac atttcaaatt ttgcacaaat
120
aatattagcc aatacataac tagatttgaa taaagtcaga tgaagcaata attcctcctc
180
tgtgtttgaa aggaatgagt gtggttacaa agtcacagga tgagtcacctg ggatctgggg
240
tgaggagaagg ggtggatcaa gaatgacttg ggtttgtcac tccctagcag gctgagggcg
300
tgacacagca gctcgggtggc ggagaggtct attctagttt ctaacactcc aatgctaact
360

```

ttttggatgt atttccttct agcatgtaga aagggtttt cttggctgcc aggaagtagg
420
gagcagggat gtggcatggg gatgatctga ggacagccag gcatatgctc agacactttg
480
gaaaactggg gagggggaac agggagacag aatcttcctc ttcttccttt tgtgaactgg
540
ggaggagggt gcttgggtgac attttcctga gtataaagaa ggaatacagg tttgaaagg
600
ttgtaattgt atatgaaaac aggtattgaa aaccaatact gggggaaaaa aggcattgta
660
aacacttcta tttaaaatga agatttctgg aacaactata ctatatagtg gtatcacaag
720
tcttttagctg gtaagatcta gcaactgaaac aactcttaat ttttaacttg tgagggttct
780
ttttaagca ccacttaaga cctatatatt aaaaaatta aatatagaaa gattgttcta
840
tctaataaat gagtttgaga atgcacagga aacaacaaaa cccattttta acctctggta
900
actgaagtgg agcattaaat tcaaagccac tttgaggatt tctacattg ttcacctaag
960
ggaaaacaaa tgcagagcta tcaaagagct tctcgataaa ttcccagacc ttggagggt
1020
acagcttttc ataaatatgg tcaactggact gatgatttct aaatttttaa tgtaataccc
1080
ccaaaaagta aaatatagga tttataagta ttttattttt ctgagaaatg accaaaaaat
1140
tggaaccagt ttaacaatc tctgaaaact ttaaattcta gacatgttta ttttgaaaca
1200
cacttccaaa caagataaac aacaatatgt aagtctacta cactgcagaa gtagcttaaa
1260
cttgccaaga catcctcctt tgcacttggt tctcaagag ttgctaggtc atttttttg
1320
cctgtggcca gcagcctctt taaaaacaac aaaggaccta atgtcaaagt cactctcagg
1380
tgtttgccct gccagctcag gccttctccg cacaccgcac cccgaaggag cacggaggcc
1440
cgcagggtcg gctggccctg gttccagcct caccgccggt tggaccgctt ttcgtacttg
1500
tcttggtgc tccgctttcg tggcggggag taactggcgg aacctcgagc gcggaagctg
1560
tgcttgtaag gatggcttct gtgtttcttc gggttttctt ctttctgggc ctggctcttc
1620
gctgggttct tategccctc ttttgttca tgggtctgct ctttatgaga gggcaatgtg
1680
tttttaattg tgtaattag aaatctttta ttggtgctag caagaggaca cttcatccaa
1740
cccatgggtc ccattgttcc agctctagtt ttcccacgtt ttgcctcctt aagcagttct
1800
tctattgctt tctctccag ctctgatcc tcttccatcg ctggggcggt ttctggatcc
1860
tcaggtggtg ctggcggatc gggggctctg tcccatagcg cgaggcgagg aggcgaagca
1920
ggaagcaagg accgaccgac ggaaggcgcg gaggacggaa ggaggaggga ggagcgcagc
1980

99
1982

<210> 5104
<211> 167
<212> PRT
<213> Homo sapiens

<400> 5104
Met Phe Ile Leu Lys His Thr Ser Lys Gln Asp Lys Gln Gln Tyr Val
1 5 10 15
Ser Leu Leu His Cys Arg Ser Ser Leu Asn Leu Pro Arg His Pro Pro
20 25 30
Leu His Leu Phe Pro Gln Glu Leu Gly His Phe Phe Cys Leu Trp
35 40 45
Pro Ala Ala Ser Leu Lys Thr Thr Lys Asp Leu Met Ser Lys Ser Leu
50 55 60
Ser Gly Val Cys Pro Ala Ser Ser Gly Leu Leu Arg Thr Pro His Pro
65 70 75 80
Glu Gly Ala Arg Arg Pro Ala Gly Leu Ala Gly Pro Gly Ser Ser Leu
85 90 95
Thr Ala Gly Trp Thr Ala Phe Arg Thr Cys Pro Gly Cys Ser Ala Phe
100 105 110
Val Ala Gly Ser Asn Trp Arg Asn Leu Glu Arg Gly Ser Cys Ala Cys
115 120 125
Lys Asp Gly Phe Cys Val Ser Ser Gly Phe Leu Leu Ser Gly Pro Gly
130 135 140
Ser Ser Leu Val Pro Tyr Arg Pro Leu Phe Val His Gly Leu Ala Leu
145 150 155 160
Tyr Glu Arg Ala Met Cys Phe
165

<210> 5105
<211> 1359
<212> DNA
<213> Homo sapiens

<400> 5105
ntgctgatgg aatgtttctg ttcagggctg ttgtgacagt tgtgaagaga cagtccggcc
60
agtgccaatg agtgcattgg ttgggagttg ttttgtgtgc ccccgcaaa gagggtggg
120
tccagttccc cccacaccca gcaaagtggg caagaccccc cagaggtggt tctctctgtt
180
ctggcttgtt gcaggttcgg agggcagccc tgagtgtctg ccatccgctc aactcagtgt
240
tttcttttcc cgcgagacct cgcgacctgt gtcagcagag ccgacctgca ccaccatgtg
300
catcatcttc ttttaagttt atcctcgccc tgtttccaaa aacgcgtaca ggctcatctt
360
ggcagccaac agggatgaat tctacagccg accctccaag ttagctgact tctgggggaa
420
caacaacgag atcctcagtg ggctggacat ggaggaaggc aaggaaggag gcacatggct
480

gggcatcagc acacgtggca agctggcagc actcaccaac tacctgcagc cgcagctgga
 540
 ctggcaggcc cgagggcgag cacagcaaag ggagacgtca ttgctacta tgggaaccga
 600
 ggggagcctg atcctatcgt ttgacgccc ggcacgtacg ggctgagcaa cgcgctgctg
 660
 gagactccct ggaggaagct gtgctttggg aagcagctct tcctggaggc tgtggaacgg
 720
 agccaggcgc tgcccaagga tgtgctcatc gccagcctcc tggatgtgct caacaatgaa
 780
 gaggcgcagc tgccagaccc ggccatcgag gaccaggggtg gggagtacgt gcagcccatg
 840
 ctgagcaagt acgcggctgt gtgcgtgcgc tgccctggct acggcaccag aaccaacact
 900
 atcatcctgg tagatgcgga cggccacgtg accttactg agcgtagcat gatggacaag
 960
 gacctctccc actgggagac cagaacctat gagttcacac tgcagagcta accccacctc
 1020
 tgggcctggc cagtgggctc ctggggggcc ctgccttgag gggcactgtg gacaggaaac
 1080
 cttcctttgc catactgcat tgcactgccc gtggcttggc cagcatcccc cggatcaggg
 1140
 ccctgtgggt tgcgtgttac ccatctgtgt ccccatgccc agttcaggggt ctgcctttat
 1200
 gccagtgagg agcagcagag tctgatacta ggtctaggac cggccgaggt ataccatgaa
 1260
 catgtggata gacctgagcc cactcttgca catgtacaca ggcactcaca tggcacacac
 1320
 atacactcct gcgtgtgcac aagcacacac atgccaggc
 1359

<210> 5106

<211> 178

<212> PRT

<213> Homo sapiens

<400> 5106

Met	Ala	Gly	His	Gln	His	Thr	Trp	Gln	Ala	Gly	Ser	Thr	His	Gln	Leu
1			5						10					15	
Pro	Ala	Ala	Ala	Ala	Gly	Leu	Ala	Gly	Pro	Arg	Ala	Ser	Thr	Ala	Lys
		20						25					30		
Gly	Asp	Val	Ile	Cys	Tyr	Tyr	Gly	Asn	Arg	Gly	Glu	Pro	Asp	Pro	Ile
	35						40					45			
Val	Leu	Thr	Pro	Gly	Thr	Tyr	Gly	Leu	Ser	Asn	Ala	Leu	Leu	Glu	Thr
	50					55					60				
Pro	Trp	Arg	Lys	Leu	Cys	Phe	Gly	Lys	Gln	Leu	Phe	Leu	Glu	Ala	Val
65				70					75					80	
Glu	Arg	Ser	Gln	Ala	Leu	Pro	Lys	Asp	Val	Leu	Ile	Ala	Ser	Leu	Leu
			85					90					95		
Asp	Val	Leu	Asn	Asn	Glu	Glu	Ala	Gln	Leu	Pro	Asp	Pro	Ala	Ile	Glu
		100						105				110			
Asp	Gln	Gly	Gly	Glu	Tyr	Val	Gln	Pro	Met	Leu	Ser	Lys	Tyr	Ala	Ala
	115					120						125			
Val	Cys	Val	Arg	Cys	Pro	Gly	Tyr	Gly	Thr	Arg	Thr	Asn	Thr	Ile	Ile

130	135	140	
Leu Val Asp Ala Asp Gly His Val Thr Phe Thr Glu Arg Ser Met Met			
145	150	155	160
Asp Lys Asp Leu Ser His Trp Glu Thr Arg Thr Tyr Glu Phe Thr Leu			
	165	170	175
Gln Ser			

<210> 5107

<211> 1207

<212> DNA

<213> Homo sapiens

<400> 5107

```

ngggcccggc ggattctccg gctgaggggtc agtccagagt ctgcatccag gtcactgacc
60
agtcctgcag cccgcaggct ctgctgtgcc tctttggcgt attcctcttg ctactcccc
120
acagggatga ccaccacctg gaacggggac agccacagtg gccatttccc cccgcagctt
180
tctgccagca ctccaacag tctttccaca gaaccgagca ctgctcggtg aatgaggact
240
ggacgctcca gggcacccgc ccagtttgt atttatztat ttatttat tttagagac
300
agagtctcgc tctgtcgcnc taggggggtg cagtggcgca atctcagctc actgcaacct
360
ccacctcccg ggttcaagcg attctcctgc ctcagcctcc tgagtagctg ggattacagg
420
cgtgtgccac catgcccggc taatttttgt attttttagta gagacagggt ttcaccgtgt
480
tagccagggt ggtcttgatc tctgacctc atgatccgtc cgcctcagcc tcccagagtg
540
ctgggattac aggcattgagc cactgcgcct ggcccaattt attttttttt gtagtttcat
600
tctctcaca tccaaacagc tacagcttcc ctcttttgt ggggtcccca aaccaagtct
660
cttttcagga gagcagacat gtgcctccac acagttctga agttctgggg gctccacatt
720
gtcagctggg ttgggggtctc ccatgtgagg gaggctgatg gcactcgcag gtttttgcct
780
catctatgta caaaggctca gaaaatttct tcggcatttg ggaccctcgt gttctgtagc
840
tccaccagtc gctgcacagc ctcaggcaag tccactccc caaggcgacg attatctcga
900
gtccgaatgt tcaactgttct cttactttgc tctttctggc caaccacaaa ctgaaaattg
960
tagtgggcaa gctgggcccc gcggattctc cggctgaggg tcagtccaga gtctgcattc
1020
aggtcactga ccagtcctgc agcccgagg ctctgctgtg cctctttggc gtattcctct
1080
tgctcactcc ccacagggat gaccaccacc tggaaacggg acagccacag tggccctta
1140
tactggaggt caaatctcag gggcggttgg aagtcaagct gaattgtccc aactgatgt
1200

```

ggccggc
1207

<210> 5108
<211> 83
<212> PRT
<213> Homo sapiens

<400> 5108
Met Arg Thr Gly Arg Ser Arg Ala Pro Ala Pro Val Cys Ile Tyr Leu
1 5 10 15
Phe Ile Tyr Leu Phe Arg Asp Arg Val Ser Leu Cys Arg Xaa Arg Gly
20 25 30
Val Gln Trp Arg Asn Leu Ser Ser Leu Gln Pro Pro Pro Gly Phe
35 40 45
Lys Arg Phe Ser Cys Leu Ser Leu Leu Ser Ser Trp Asp Tyr Arg Arg
50 55 60
Val Pro Pro Cys Pro Ala Asn Phe Cys Ile Phe Ser Arg Asp Arg Val
65 70 75 80
Ser Pro Cys

<210> 5109
<211> 651
<212> DNA
<213> Homo sapiens

<400> 5109
nnggccgctt ccgtgcaaaa gctcggggac gctctgctgg agaagattcg ggagcccgc
60
ctgcagnatg cgcagtggac ttttgaatca gctgtgcaag agaatatcag cattaatggg
120
caagcatggc aggaagcttc agataattgt tttatggatt ctgacatcaa agtacttgaa
180
gatcagtttg atgaaatcat agtagatata gccacaaaac gtaagcagta tcccagaaag
240
atcctggaat gtgtcatcaa aaccataaaa gcaaaacaag aaattctgaa gcagtaccac
300
cctgtgttac atccactgga cctaaaatat gaccctgac cagttctcaa cggaatgct
360
ttcaactttt cccattcaa catgatgttg gctgtggatt tgtcatatat ggtttttatt
420
acttcggccc ctcatatgga aaatttgaaa tgcagagggg aaacagtagc aaaggagatc
480
agtgaagcca tgaagtcctt gcctgcatta attgaacaag gagagggatt ttcccaagtt
540
ctcaggatgc agcctgttat ccacctccag aggattcacc aagaagtctt ttccagttgt
600
cataggaaac cagatgctaa acctgagaac ttataaacac agatagaaac c
651

<210> 5110
<211> 206
<212> PRT

<213> Homo sapiens

<400> 5110

```

Leu Leu Glu Lys Ile Arg Glu Pro Ala Leu Gln Xaa Ala Gln Trp Thr
 1           5           10           15
Phe Glu Ser Ala Val Gln Glu Asn Ile Ser Ile Asn Gly Gln Ala Trp
      20           25           30
Gln Glu Ala Ser Asp Asn Cys Phe Met Asp Ser Asp Ile Lys Val Leu
      35           40           45
Glu Asp Gln Phe Asp Glu Ile Val Asp Ile Ala Thr Lys Arg Lys
      50           55           60
Gln Tyr Pro Arg Lys Ile Leu Glu Cys Val Ile Lys Thr Ile Lys Ala
      65           70           75           80
Lys Gln Glu Ile Leu Lys Gln Tyr His Pro Val Val His Pro Leu Asp
      85           90           95
Leu Lys Tyr Asp Pro Asp Pro Val Leu Asn Gly Asn Ala Phe Asn Phe
      100          105          110
Ser Pro Phe Asn Met Met Leu Ala Val Asp Leu Ser Tyr Met Val Phe
      115          120          125
Ile Thr Ser Ala Pro His Met Glu Asn Leu Lys Cys Arg Gly Glu Thr
      130          135          140
Val Ala Lys Glu Ile Ser Glu Ala Met Lys Ser Leu Pro Ala Leu Ile
      145          150          155          160
Glu Gln Gly Glu Gly Phe Ser Gln Val Leu Arg Met Gln Pro Val Ile
      165          170          175
His Leu Gln Arg Ile His Gln Glu Val Phe Ser Ser Cys His Arg Lys
      180          185          190
Pro Asp Ala Lys Pro Glu Asn Phe Ile Thr Gln Ile Glu Thr
      195          200          205

```

<210> 5111

<211> 2247

<212> DNA

<213> Homo sapiens

<400> 5111

```

ncccccgccg ccgcctcagg ctctctacccc gccgcgcgcg ccgcgcgagg cggggacatg
60
caaatgaacc aacggtctcc gcagcgccgc gccgcgcagg cgcaagccgc cgccgagttc
120
tggtgcgag gcgcggggccg ccgcggcccc gctctcttgc gcaagcgcg tgctcgcttc
180
ttctgggcgg acgctctgga ggcaaaacat ttccctgctg ggggcggcga ccaccgtgag
240
cgtcccgga ggggcggcaa agacgcctcc gtcgcgcacg aggtggcctc gttggcttta
300
ccttggttcg cggtcgtcct tggttatcgt gagcgccgc gagtctctgg gaggccaagc
360
ctaggggcgc cacagcgct gcgcgcgtac ggcggccgga aggggctaga ggcggctccc
420
tggtgacaa ccgcgcgccc cacctttccc cacgtggccg cgaagaccgg ctcaggagca
480
tctatcggct gcacgccaac atcaacacag gcgaagatgg tctccaagcg cattgccag
540

```

gagacctttg atgcagctgt gcgcgagaac atcgaggagt ttgcgatggg gccagaggag
600
gcagtgaag aggccgtgga gcagtttgaa tcgcaagggg ttgatctgag caacattgta
660
aagacggcac ctaaagtctc tgcagacgga tcccaggagc ccacacatga catcctgcag
720
atgctcagtg acctccagga gtctgtggcc agctctcgcc cccaggaggt gtcagcatac
780
ctcacccgct tctgcgacca gtgcaaacag gacaaggcct gccgcttcct cgcgggcccag
840
aagggggcct accccatcat cttcactgcc aggaagctgg ccaactgcagg tgaccagggc
900
cttctgctcc agtccctcaa tgccctgtcg gtgctgactg atggacagcc agacctcctg
960
gatgcccagg gcctgcagct cctagtggcc acgctgaccc agaattgctga tgaggctgac
1020
ctgacctgct ctgggatccg ctgtgtgcgt cacgcttgcc tgaaacatga acagaatcgg
1080
caagacctgg tgaaagctgg cgtgctgcct ctgctgactg gtgccatcac ccatcatggc
1140
caccacactg acgtggtcag ggaagcctgc tggggccctgc gtgtcatgac cttcgatgac
1200
gacatccgtg tgccctttgg ccatgcccac aacctgcca agatgattgt gcaggagaac
1260
aaaggcctga aggtgctcat cgaagccacc aaagcgttcc tggataaccc tggcatcctg
1320
agcgagctct gtggaaccct gtcccgcctg gccattcgca acgagttctg ccaggaggtc
1380
gtcgacctcg ggggcctgag cattctgggtg tccctgctag ccgactgcaa tgaccaccag
1440
atgagggacc agagcggcgt tcaggagctc gtgaagcaag tgctgagcac cctgcgagcc
1500
atcgcaggca acgacgacgt gaaagatgct attgtccgtg ctggtgggac ggagtccatc
1560
gtggctgcta tgaccagca tctgaccagc cccagggtgt gggagcagag ctgcgcggcc
1620
ctgtgcttcc tggccctgcg taagcccgac aacagccgca tcatcgtgga ggggtggcggg
1680
gctgtggcag cactgcaggc catgaaggca caccgcgaga aggccggcgt gcagaaacag
1740
gcttgcatgc tgatccgaaa cctggtggcc cacggccagg ccttctcgaa gccatcctg
1800
gacctggggg ctgaggcact catcatgcag gcccgatctg cccaccgtga ctgtgaggac
1860
gtggccaagg ccgccctgcg ggacctgggt tgtcatgtcg agctccgaga gctgtggaca
1920
ggccagaggg gcaacctggc gccatgaccc caggcccagt ctgggccgtg actctgggtg
1980
agtcgtgtga ctcaggaatg ggggtagatc catgtcctcc actgtcccc attagttctg
2040
tccccttcac aatgagaagt gttttctggc aggccctagg taaagggtcg ggggaggggg
2100
gagccttgta gggaggcctc tacacagaag aaagcagccc ccatgtccca gccacttctg
2160

gggtcccagcc agcagcacgg atgttactgt cctgctcctt cccccagccc cacgccttac
 2220
 cagagggggc aaagggcacg tcccatc
 2247

<210> 5112
 <211> 581
 <212> PRT
 <213> Homo sapiens

<400> 5112
 Ala Lys His Phe Pro Ala Gly Gly Gly Asp His Arg Glu Arg Pro Gly
 1 5 10 15
 Arg Gly Gly Lys Asp Ala Ser Val Ala His Glu Val Ala Ser Leu Ala
 20 25 30
 Leu Pro Trp Phe Ala Val Val Leu Gly Tyr Arg Glu Arg Pro Arg Val
 35 40 45
 Ser Gly Arg Pro Ser Leu Gly Ala Pro Gln Arg Leu Arg Ala Tyr Gly
 50 55 60
 Gly Arg Lys Gly Leu Glu Ala Ala Pro Trp Val Thr Thr Ala Arg Pro
 65 70 75 80
 Thr Phe Pro His Val Ala Ala Lys Thr Gly Ser Gly Ala Ser Ile Gly
 85 90 95
 Cys Thr Pro Thr Ser Thr Gln Ala Lys Met Val Ser Lys Arg Ile Ala
 100 105 110
 Gln Glu Thr Phe Asp Ala Ala Val Arg Glu Asn Ile Glu Glu Phe Ala
 115 120 125
 Met Gly Pro Glu Glu Ala Val Lys Glu Ala Val Glu Gln Phe Glu Ser
 130 135 140
 Gln Gly Val Asp Leu Ser Asn Ile Val Lys Thr Ala Pro Lys Val Ser
 145 150 155 160
 Ala Asp Gly Ser Gln Glu Pro Thr His Asp Ile Leu Gln Met Leu Ser
 165 170 175
 Asp Leu Gln Glu Ser Val Ala Ser Ser Arg Pro Gln Glu Val Ser Ala
 180 185 190
 Tyr Leu Thr Arg Phe Cys Asp Gln Cys Lys Gln Asp Lys Ala Cys Arg
 195 200 205
 Phe Leu Ala Ala Gln Lys Gly Ala Tyr Pro Ile Ile Phe Thr Ala Arg
 210 215 220
 Lys Leu Ala Thr Ala Gly Asp Gln Gly Leu Leu Leu Gln Ser Leu Asn
 225 230 235 240
 Ala Leu Ser Val Leu Thr Asp Gly Gln Pro Asp Leu Leu Asp Ala Gln
 245 250 255
 Gly Leu Gln Leu Leu Val Ala Thr Leu Thr Gln Asn Ala Asp Glu Ala
 260 265 270
 Asp Leu Thr Cys Ser Gly Ile Arg Cys Val Arg His Ala Cys Leu Lys
 275 280 285
 His Glu Gln Asn Arg Gln Asp Leu Val Lys Ala Gly Val Leu Pro Leu
 290 295 300
 Leu Thr Gly Ala Ile Thr His His Gly His His Thr Asp Val Val Arg
 305 310 315 320
 Glu Ala Cys Trp Ala Leu Arg Val Met Thr Phe Asp Asp Asp Ile Arg
 325 330 335
 Val Pro Phe Gly His Ala His Asn His Ala Lys Met Ile Val Gln Glu

340 345 350
 Asn Lys Gly Leu Lys Val Leu Ile Glu Ala Thr Lys Ala Phe Leu Asp
 355 360 365
 Asn Pro Gly Ile Leu Ser Glu Leu Cys Gly Thr Leu Ser Arg Leu Ala
 370 375 380
 Ile Arg Asn Glu Phe Cys Gln Glu Val Val Asp Leu Gly Gly Leu Ser
 385 390 395 400
 Ile Leu Val Ser Leu Leu Ala Asp Cys Asn Asp His Gln Met Arg Asp
 405 410 415
 Gln Ser Gly Val Gln Glu Leu Val Lys Gln Val Leu Ser Thr Leu Arg
 420 425 430
 Ala Ile Ala Gly Asn Asp Asp Val Lys Asp Ala Ile Val Arg Ala Gly
 435 440 445
 Gly Thr Glu Ser Ile Val Ala Ala Met Thr Gln His Leu Thr Ser Pro
 450 455 460
 Gln Val Trp Glu Gln Ser Cys Ala Ala Leu Cys Phe Leu Ala Leu Arg
 465 470 475 480
 Lys Pro Asp Asn Ser Arg Ile Ile Val Glu Gly Gly Gly Ala Val Ala
 485 490 495
 Ala Leu Gln Ala Met Lys Ala His Pro Gln Lys Ala Gly Val Gln Lys
 500 505 510
 Gln Ala Cys Met Leu Ile Arg Asn Leu Val Ala His Gly Gln Ala Phe
 515 520 525
 Ser Lys Pro Ile Leu Asp Leu Gly Ala Glu Ala Leu Ile Met Gln Ala
 530 535 540
 Arg Ser Ala His Arg Asp Cys Glu Asp Val Ala Lys Ala Ala Leu Arg
 545 550 555 560
 Asp Leu Gly Cys His Val Glu Leu Arg Glu Leu Trp Thr Gly Gln Arg
 565 570 575
 Gly Asn Leu Ala Pro
 580

<210> 5113
 <211> 472
 <212> DNA
 <213> Homo sapiens

<400> 5113
 cagactatgg tccagcctct gctccatgtg cccctgtgg gtctttgtga tctcagtcct
 60
 ggcaccttga cccgctgctt gttctgctct cctttaact ccatgcacct gacacctgta
 120
 attggcacgc agcggggagc ctggcacctg cagtgtagac aactggcca cgcctcagtg
 180
 caagagggcc cctttgctaa tgtgcacagc tctttatgcc tttttccta tgcctttttg
 240
 gattggagca agagattttt tttccaagt aaagaacaat ttatgttcct aaatactttt
 300
 tttccttgac atgatgaagt tgagcaaggt ggctatagaa ctttttttct taattttatt
 360
 gcccaagtaa tggtctttac aaagtaggga aatacagata cataaaaaga agactgccaa
 420
 tccccgtaa tcccaccagt cgcattcccta cccgctctta ggagattccg ga
 472

<210> 5114
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5114
 Met Val Gln Pro Leu Leu His Val Pro Pro Val Gly Leu Cys Asp Leu
 1 5 10 15
 Ser Pro Gly Thr Leu Thr Arg Cys Leu Phe Cys Ser Pro Leu Asn Ser
 20 25 30
 Met His Leu Thr Pro Val Ile Gly Thr Gln Arg Gly Ala Trp His Leu
 35 40 45
 Gln Cys Arg His Thr Gly His Arg Ser Val Gln Glu Gly Pro Phe Ala
 50 55 60
 Asn Val His Ser Ser Leu Cys Leu Phe Ser Tyr Ala Phe Leu Asp Trp
 65 70 75 80
 Ser Lys Arg Phe Phe Phe Pro Ser Lys Glu Gln Phe Met Phe Leu Asn
 85 90 95
 Thr Phe Phe Pro
 100

<210> 5115
 <211> 1003
 <212> DNA
 <213> Homo sapiens

<400> 5115
 nttttttttt tttttttttt tttttttttt tttttttttt ttttttttag ccacaaaaca
 60
 ttttatttac aaaatatata ctgaatacta tacatctggc cccatcacca tggaaacaac
 120
 tccaaagcct gcctggggat ttgtgcccga gccagccca ggagggttag agaaagcaaa
 180
 ggtgtctacc agccgccgcc atcccagaag gaaagcctct tcccatgagt gcctgtgggt
 240
 gggcgttgag ctcaacaccc acaaaggcca gaaggcctgg gggcagtgag gtgatggtga
 300
 gggcatggga agcagatgct gctgagggtg ggtggaggga gaaatggaga cccagcacc
 360
 agcaggggga gccagggtgac agcaggggga gcagatggca gggccccagg cagtccagga
 420
 cccaggctc tgaagggtgg ggcaaggggg tcaggtcacg tcttgacatc cagcagtggc
 480
 tccgcttggt ctggtagccc actctgccca gccatgtccc accttgggggt ctcccatgtc
 540
 agagagcagc tcctgctcag catcatgcag ttcctcagct gggcatagc tgtacatggg
 600
 gagcaggtgc atgcgcagcc ggtccacccg ctttttcttc tgtacataca ttaccacagc
 660
 caccaccacc ccgaccaggg tgatgaggaa gaaggggccc aacacatagc ccaccatgga
 720
 gtcgctgttg gcctgggggg cattgggcac agtgggtgta ctcatgacat cagcagccgg
 780

agggctgggt ggtcagcatg ggcagtggcg cttcgggagg ggcctccac tgggctcccc
 840
 agtcgtatgc tcacgtcccc aggtcaaggg ggcagccag ggtggggagg gcgtcaggcc
 900
 gctgctagga tgcgggccag caacagcgga ncaggaggtg gttccacgg cgctgggnag
 960
 gctcacgccg gaggtggggg tgttggggga tgctgatggg tcg
 1003

<210> 5116

<211> 226

<212> PRT

<213> Homo sapiens

<400> 5116

Met	Leu	Leu	Arg	Val	Gly	Gly	Gly	Arg	Asn	Gly	Asp	Pro	Ala	Pro	Ser
1				5					10				15		
Arg	Gly	Ser	Gln	Val	Thr	Ala	Gly	Glu	Ala	Asp	Gly	Arg	Ala	Pro	Gly
			20					25					30		
Ser	Pro	Gly	Pro	Gln	Ala	Leu	Lys	Gly	Gly	Ala	Arg	Gly	Ser	Gly	His
		35					40					45			
Val	Leu	Thr	Ser	Ser	Ser	Gly	Ser	Ala	Cys	Ala	Gly	Ser	Pro	Leu	Cys
	50					55					60				
Pro	Ala	Met	Ser	His	Leu	Gly	Val	Ser	His	Val	Arg	Glu	Gln	Leu	Leu
65					70					75				80	
Leu	Ser	Ile	Met	Gln	Phe	Leu	Ser	Trp	Val	Ile	Ala	Val	His	Gly	Glu
				85					90					95	
Gln	Val	His	Ala	Gln	Pro	Val	His	Pro	Leu	Phe	Leu	Leu	Tyr	Ile	His
			100					105					110		
Tyr	His	Ser	His	His	His	Pro	Asp	Gln	Gly	Asp	Glu	Glu	Glu	Gly	Pro
		115				120						125			
Gln	His	Ile	Ala	His	His	Gly	Val	Ala	Val	Gly	Leu	Gly	Gly	Ile	Gly
	130					135					140				
His	Ser	Gly	Val	Thr	His	Asp	Ile	Ser	Ser	Arg	Arg	Ala	Gly	Trp	Ser
145					150					155				160	
Ala	Trp	Ala	Val	Ala	Leu	Arg	Glu	Gly	Ala	Ser	Thr	Gly	Leu	Pro	Ser
			165						170					175	
Arg	Met	Leu	Ile	Val	Pro	Gly	Gln	Gly	Gly	Met	Pro	Gly	Trp	Gly	Gly
		180						185					190		
Arg	Gln	Ala	Ala	Ala	Arg	Met	Arg	Ala	Ser	Asn	Ser	Gly	Xaa	Gly	Gly
	195					200						205			
Gly	Ser	His	Gly	Ala	Gly	Xaa	Ala	His	Ala	Gly	Gly	Gly	Gly	Val	Gly
	210				215						220				
Gly	Cys														
225															

<210> 5117

<211> 1180

<212> DNA

<213> Homo sapiens

<400> 5117

nngaattcaa cttgttcaag agaaggtctt gtacgtgcct aagttctaga gcctcctgac
 60

gtgagcatgg ctgagagtga ggaccgctcc ctgaggatcg ttctggtagg gaaaactgga
 120
 agtgggaaaa gtgcaacagc gaacaccatc cttgggagagg aaatctttga ttctagaatt
 180
 gctgccccaa ctgttaccaa gaactgtcaa aaagcatccc gggaatggca ggggagagac
 240
 cttcttggtg tagacactcc agggctcttt gacaccaagg agagcctgga caccacctgc
 300
 aaggaaatca gccgctgcat catctcctcc tgcccagggc cccatgctat tgtcctagtt
 360
 ctgctgctgg gccgctacac agaggaggag cagaaaaccg ttgcattgat caaggctgtc
 420
 tttgggaagt cagccatgaa gcacatggtc atcttggtca ctgcgaaaga agagttggag
 480
 ggccagagct tccatgactt catagcagat gcggatgtgg gcctaaaaag catcgtcaag
 540
 gagtgcgga accgctgctg tgccttttagc aacagcaaga aaaccagtaa ggcagagaag
 600
 gaaagtcaag tgcaggagtt ggtggagctg atagagaaaa tgggtgcagtg caacgaaggg
 660
 gcttactttt ctgatgacat atacaaggac acagaggaaa ggctgaaaca acgggaagag
 720
 gttttgagga aaatctacac tgaccaatta aatgaagaaa ttaaactagt agaagaggat
 780
 aagcataaat cagaggaaga aaaggagaaa gaaattaaat tactaaaatt aaaatatgat
 840
 gaaaaataa aaaatataag ggaagaagct gagagaaata ttttaaaga tgtttttaat
 900
 aggatttga agatgctttc agaaatatgg cataggtttt tgtcgaaatg taagttttat
 960
 tcttccta at tactgtgat ttgttaatgg atgaattgta ttttgcaaag atagttagag
 1020
 aaatacctcc tcccccttag ctttattaag gtatcattga taaataaaaa taaaatatgt
 1080
 ttaatgtata taatgtgatt tttaaatata tatatatata tatacacaca ttgtgaaata
 1140
 atgaaataaa ggtaattaac acatctaaaa aaaaaaaaaa
 1180

<210> 5118

<211> 300

<212> PRT

<213> Homo sapiens

<400> 5118

Met	Ala	Glu	Ser	Glu	Asp	Arg	Ser	Leu	Arg	Ile	Val	Leu	Val	Gly	Lys
1				5					10					15	
Thr	Gly	Ser	Gly	Lys	Ser	Ala	Thr	Ala	Asn	Thr	Ile	Leu	Gly	Glu	Glu
			20					25				30			
Ile	Phe	Asp	Ser	Arg	Ile	Ala	Ala	Gln	Ala	Val	Thr	Lys	Asn	Cys	Gln
		35				40				45					
Lys	Ala	Ser	Arg	Glu	Trp	Gln	Gly	Arg	Asp	Leu	Leu	Val	Val	Asp	Thr
	50					55				60					
Pro	Gly	Leu	Phe	Asp	Thr	Lys	Glu	Ser	Leu	Asp	Thr	Thr	Cys	Lys	Glu

```

65          70          75          80
Ile Ser Arg Cys Ile Ile Ser Ser Cys Pro Gly Pro His Ala Ile Val
Leu Val Leu Leu Gly Arg Tyr Thr Glu Glu Glu Gln Lys Thr Val
Ala Leu Ile Lys Ala Val Phe Gly Lys Ser Ala Met Lys His Met Val
Ile Leu Phe Thr Arg Lys Glu Glu Leu Glu Gly Gln Ser Phe His Asp
Phe Ile Ala Asp Ala Asp Val Gly Leu Lys Ser Ile Val Lys Glu Cys
Gly Asn Arg Cys Cys Ala Phe Ser Asn Ser Lys Lys Thr Ser Lys Ala
Glu Lys Glu Ser Gln Val Gln Glu Leu Val Glu Leu Ile Glu Lys Met
Val Gln Cys Asn Glu Gly Ala Tyr Phe Ser Asp Asp Ile Tyr Lys Asp
Thr Glu Glu Arg Leu Lys Gln Arg Glu Glu Val Leu Arg Lys Ile Tyr
Thr Asp Gln Leu Asn Glu Glu Ile Lys Leu Val Glu Glu Asp Lys His
Lys Ser Glu Glu Glu Lys Glu Lys Glu Ile Lys Leu Leu Lys Leu Lys
Tyr Asp Glu Lys Ile Lys Asn Ile Arg Glu Glu Ala Glu Arg Asn Ile
Phe Lys Asp Val Phe Asn Arg Ile Trp Lys Met Leu Ser Glu Ile Trp
His Arg Phe Leu Ser Lys Cys Lys Phe Tyr Ser Ser

```

<210> 5119
 <211> 1450
 <212> DNA
 <213> Homo sapiens

```

<400> 5119
nnaatgatga atatcaaaga ttaaagcact tcactaaatc ttgtattttt tcccaaaata
60
cagctggtga aaatcttatt cttgagtaga aaggaatcaa acaagtcata taccaccgt
120
cttctgtct gtactggaac catcacaggc ttttgaggaa ctacttttga accgttcccc
180
agagaggcat ttgccccagt agctatgatt ataatttgca atgacagcca cagtgtttc
240
atccttctgg gcttctctaa caagccacat ttggagaaga tactttttng gatcattttt
300
attttttatt ttttgactct tgcaggaaat atgggtcatag ttcttgtgtc cttgaaggat
360
ccaaaactcc acatccctat gtatttcttt ctttccaacc tttcttggt agacctctgt
420
ttgaccagca gctgtgttcc acagatgttg attaaattct ggggccaga aaagaccatc
480
agctacattg gctgtgcat tcaactctat gtttttttgt ggcttggggc caggaatat
540

```

gtccttcttg ttgtcatggc tgtggattgt tatgtagcag tgtgtcatcc actgcaaaat
 600
 accatgatca tgcacccaaa actttgtctg cagctggcta tcttggcatg ggggactggc
 660
 ttggccagtg ctctgatcca gtcccctgcc accctccggt tacccttctg ctcccagcgg
 720
 atggtggatg atgttgtttg tgaagtccca gctctgattc agctctccag tactgatact
 780
 acctacagtg aaattcagat gtctatcgcc agtgttgtcc tcttgggtgat gcccttgatc
 840
 attatccttt cctcttcttg tgctattgct aaggctgtgc tgagaattaa gtcaactgca
 900
 ggacagaaga aagcatttgg cacctgcac tctcaccttc ttgtgggttc tctcttttat
 960
 ggcactgtca caggtgtcta ccttcaacca aaaaatcact atcctcatga atggggcaaa
 1020
 tttctcactc ttttctacac tgtagtaacc ccaactctta atccccctcat ctacactcta
 1080
 aggaacaagg aggtaaaggg agcactaata agattgggga ggaggacctg ggattcccag
 1140
 aataactaac aagggttaaca tatgtttacc ttgcttaac ctaagaatag agaacaacct
 1200
 catcacaaaa agctggagat acacctccta agccaaaagt aggagagaaa gagctgcatt
 1260
 ctgttcaggt tgagatttca gtttccttca tcaatcaatt gggcccttaa attcttcata
 1320
 ttgtggattt agacacagta tgggtataaaa attaatatat ttaatagcta ttgtcttgaa
 1380
 aaggacacaa tgcaattgaa tgggggagga ggagaagaca caagaaacac attacttgca
 1440
 aaataaaata
 1450

<210> 5120

<211> 314

<212> PRT

<213> Homo sapiens

<400> 5120

Met Ile Ile Ile Cys Asn Asp Ser His Ser Asp Phe Ile Leu Leu Gly
 1 5 10 15
 Phe Ser Asn Lys Pro His Leu Glu Lys Ile Leu Phe Xaa Ile Ile Phe
 20 25 30
 Ile Phe Tyr Phe Leu Thr Leu Ala Gly Asn Met Val Ile Val Leu Val
 35 40 45
 Ser Leu Lys Asp Pro Lys Leu His Ile Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 Asn Leu Ser Leu Val Asp Leu Cys Leu Thr Ser Ser Cys Val Pro Gln
 65 70 75 80
 Met Leu Ile Asn Phe Trp Gly Pro Glu Lys Thr Ile Ser Tyr Ile Gly
 85 90 95
 Cys Ala Ile Gln Leu Tyr Val Phe Leu Trp Leu Gly Ala Thr Glu Tyr
 100 105 110
 Val Leu Leu Val Val Met Ala Val Asp Cys Tyr Val Ala Val Cys His

115 120 125
 Pro Leu Gln Asn Thr Met Ile Met His Pro Lys Leu Cys Leu Gln Leu
 130 135 140
 Ala Ile Leu Ala Trp Gly Thr Gly Leu Ala Gln Ser Leu Ile Gln Ser
 145 150 155 160
 Pro Ala Thr Leu Arg Leu Pro Phe Cys Ser Gln Arg Met Val Asp Asp
 165 170 175
 Val Val Cys Glu Val Pro Ala Leu Ile Gln Leu Ser Ser Thr Asp Thr
 180 185 190
 Thr Tyr Ser Glu Ile Gln Met Ser Ile Ala Ser Val Val Leu Leu Val
 195 200 205
 Met Pro Leu Ile Ile Ile Leu Ser Ser Ser Gly Ala Ile Ala Lys Ala
 210 215 220
 Val Leu Arg Ile Lys Ser Thr Ala Gly Gln Lys Lys Ala Phe Gly Thr
 225 230 235 240
 Cys Ile Ser His Leu Leu Val Val Ser Leu Phe Tyr Gly Thr Val Thr
 245 250 255
 Gly Val Tyr Leu Gln Pro Lys Asn His Tyr Pro His Glu Trp Gly Lys
 260 265 270
 Phe Leu Thr Leu Phe Tyr Thr Val Val Thr Pro Thr Leu Asn Pro Leu
 275 280 285
 Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Gly Ala Leu Ile Arg Leu
 290 295 300
 Gly Arg Arg Thr Trp Asp Ser Gln Asn Asn
 305 310

<210> 5121

<211> 944

<212> DNA

<213> Homo sapiens

<400> 5121

nngcgcgcca ggggagggcg ccgtgtggca ctcggcggtc gaaaggggag ttcaaggaga
 60
 cgggggcgac gcggctgagg gcttctcgtc ggggtcgggg ctgcagccgt catgccgggg
 120
 atagtggagc tgcccactct agaggagctg aaagtagatg aggtgaaaat tagttctgct
 180
 gtgcttaaag ctgcggccca tcactatgga gctcaatgtg ataagcccaa caaggagttt
 240
 atgctctgcc gctgggaaga gaaagatccg aggcggtgtt tagaggaagg caaactggtc
 300
 aacaagtgtg ctttggactt ctttaggcag ataaaacgtc actgtgcaga gccttttaca
 360
 gaatattgga cttgcattga ttatactggc cagcagttat ttcgtcactg tcgcaaacag
 420
 caggcaaagt ttgacgagtg tgtgctggac aaactgggct ggggtcggcc tgacctggga
 480
 gaactgtcaa aggtcaccaa agtgaaaaca gatcgacctt taccggagaa tccctatcac
 540
 tcaagaccaa gaccggatcc cagccctgag atcgagggag atctgcagcc tgccacacat
 600
 ggcagccgct tttatttctg gaccaagtaa agatgggtcc gtggcccaca ctcggtcatg
 660

tgctcagaca acgactgatg aaaacgcccc tgcggtttgc atcgactgat agtgtgttct
 720
 ttccgggatc acaaacatta acaaaaaagt taacttatgt gacttggcag ttattctata
 780
 ccatttcctg tccattaaaa tttttaaagg aaacgggtgt attttattat gttttatgtg
 840
 accctttggc ctttaaagat gacttcccc tgcctttttc ttcttggtgt cctgcctgtt
 900
 cctcttgctt tgccttaggc actcgtcat gtggctgggg atcc
 944

<210> 5122

<211> 172

<212> PRT

<213> Homo sapiens

<400> 5122

Met	Pro	Gly	Ile	Val	Glu	Leu	Pro	Thr	Leu	Glu	Glu	Leu	Lys	Val	Asp
1				5					10					15	
Glu	Val	Lys	Ile	Ser	Ser	Ala	Val	Leu	Lys	Ala	Ala	Ala	His	His	Tyr
			20					25					30		
Gly	Ala	Gln	Cys	Asp	Lys	Pro	Asn	Lys	Glu	Phe	Met	Leu	Cys	Arg	Trp
			35				40					45			
Glu	Glu	Lys	Asp	Pro	Arg	Arg	Cys	Leu	Glu	Glu	Gly	Lys	Leu	Val	Asn
	50					55					60				
Lys	Cys	Ala	Leu	Asp	Phe	Phe	Arg	Gln	Ile	Lys	Arg	His	Cys	Ala	Glu
65					70					75				80	
Pro	Phe	Thr	Glu	Tyr	Trp	Thr	Cys	Ile	Asp	Tyr	Thr	Gly	Gln	Gln	Leu
			85					90					95		
Phe	Arg	His	Cys	Arg	Lys	Gln	Gln	Ala	Lys	Phe	Asp	Glu	Cys	Val	Leu
			100					105					110		
Asp	Lys	Leu	Gly	Trp	Val	Arg	Pro	Asp	Leu	Gly	Glu	Leu	Ser	Lys	Val
			115				120					125			
Thr	Lys	Val	Lys	Thr	Asp	Arg	Pro	Leu	Pro	Glu	Asn	Pro	Tyr	His	Ser
			130			135					140				
Arg	Pro	Arg	Pro	Asp	Pro	Ser	Pro	Glu	Ile	Glu	Gly	Asp	Leu	Gln	Pro
145					150					155				160	
Ala	Thr	His	Gly	Ser	Arg	Phe	Tyr	Phe	Trp	Thr	Lys				
			165						170						

<210> 5123

<211> 1139

<212> DNA

<213> Homo sapiens

<400> 5123

nngtgcacaa ccaactgtctt cccgtggcct cactgcccc ttgccttagg gcccttctct
 60
 tggctctgtg ccagcctcgg gggacctcag gctcaccac tctgaggctg agagttccaa
 120
 agccatagga tagatcctgg agcttccttg agcctgtttt cttgcctggg agttagccat
 180
 gccttggtggg gctgccaaga gggtaaagta gagagatggg tctagcttga tacagtatag
 240

gcagctgctg gatgtcagct gtggttatga tcagctccat cttgttatga tgaagacct
 300
 gaggtcagag tggacccac cccaaagccc catctggcag ctcacagctg ctctctccta
 360
 cagaaacagg cttgcatgct gatccgaaac ctggtggccc acggccaggc cttctcgaag
 420
 cccatcctgg acctgggggc tgaggcactc atcatgcagg cccgatctgc ccaccgtgac
 480
 tgtgaggacg tggccaaggc cgccctgcgg gacctgggtt gtcatgtcga gtcctgagag
 540
 ctgtggacag gccagagggg caacctggcg ccatgacccc aggccagtc tgggccgtga
 600
 ctctgggtga gtcgtgtgac tcaggaatgg gggtagatcc atgtcctcca ctgtcccca
 660
 ttagttctgt ccccttcaca atgagaagtg ttttctggca ggccctaggt aaagggtcgg
 720
 gggagggggg agcctttagt ggaggcctct acacagaaga aagcagcccc catgtcccag
 780
 ccacttctgg gtcccagcca gcagcacgga tgttactgtc ctgtccttc cccagcccc
 840
 acgccctacc agagggggca aagggcacgt cccatcactc actgccctgt ctgaaatgtg
 900
 gcagccactg tgggccaggc tcagggcagg gcaggcgatt ccagtggggg tgggccccct
 960
 ggcgcctgct gcttactgca gtttcatgca ggcctctgct ccttgtcttt cttacctgta
 1020
 aaatgggtct cagatgtcc gccctgcttg gcccagctt gtctgtctct gggtcctggg
 1080
 ccagccagga tacctgataa taaaagatca ttgggtgaaa aaaaaaaaaa aaaaaaaaaa
 1139

<210> 5124

<211> 101

<212> PRT

<213> Homo sapiens

<400> 5124

Ser	Ala	Pro	Ser	Cys	Tyr	Asp	Glu	Asp	Pro	Glu	Val	Arg	Val	Asp	Pro
1				5					10					15	
Thr	Pro	Lys	Pro	His	Leu	Ala	Ala	His	Ser	Cys	Ser	Leu	Leu	Gln	Lys
			20					25					30		
Gln	Ala	Cys	Met	Leu	Ile	Arg	Asn	Leu	Val	Ala	His	Gly	Gln	Ala	Phe
		35				40					45				
Ser	Lys	Pro	Ile	Leu	Asp	Leu	Gly	Ala	Glu	Ala	Leu	Ile	Met	Gln	Ala
	50				55				60						
Arg	Ser	Ala	His	Arg	Asp	Cys	Glu	Asp	Val	Ala	Lys	Ala	Ala	Leu	Arg
65				70					75					80	
Asp	Leu	Gly	Cys	His	Val	Glu	Leu	Arg	Glu	Leu	Trp	Thr	Gly	Gln	Arg
			85					90						95	
Gly	Asn	Leu	Ala	Pro											
			100												

<210> 5125

<211> 6244

<212> DNA

<213> Homo sapiens

<400> 5125

ngcccacccg atccaggacc acaccattca tggggatcat agataaaaca gcacggactc
60
agcagtaccc ccacctccac cagcagaatc ggacctgggc agtgtcatct gtggacaccg
120
tcctcagtcc cacgtctcca ggcaacctgc ctcagcctga gtccttcagt ccaccatcat
180
ccatcagcaa cattgccttt tataacaaaa ccaacaatgc acagaatggc catttgctgg
240
aggacgatta ttacagcccc catgggatgc tggctaacgg gtctcgtgga gacctcttgg
300
agcgagtcag ccaggcctcc tcctatcccc acgtgaaggt agctcggact ctacctgtgg
360
ctcaggcata ccaggacaac ctgtacaggc agctgtcccc agactctcgg caagggcaga
420
catcccctat caaaccaaag agaccgttcg tggagtctaa tgtttaaaag acgttttggt
480
ggagtggagc ccatatgttt tctactgcaca ttttcaggct tggtttccac attcgaggta
540
gttctctggc ttaattttct atgtagtctc tgtgtggtgt tcagagggtg cagcccacat
600
gtgaaatcc ttgcatgca gccgactggg aagcggcctc ccgggagcca ggacttcagt
660
ttctcttgtc tgtgccagc ccatgctct ctccctctct tcagatgcca acgaggagat
720
tttcgtgctg tgtgctttaa cccagggaga tcagacacac tggtcagctt tttccaggag
780
acaatcgctt tctactgatgt tcttggtgtg taattgtctt tttccttttt taaaaataa
840
ggtgttcttg ttcgttttct tctagaaact ttagaaagag tgcgatgcc ctttgccttt
900
gcatecttag ccagtgtcac ccacacagcc agccgcagcg cattctcatg ctgtggcccc
960
tccccagacc gccagcgccc tgcagccacc aggtctgcag tgtgcattag gattattgct
1020
ggtcttccta gggggtaaaa ggatcagaga gagaagaatt aagtgctaaa ttggaagaaa
1080
acccaatat agttatgtaa aatgtcacta cattgatttt ccaagaggca ttgtaggaac
1140
atgtcaaaaa cagccagccc tttaaatatt gcagtcagcc aaggaaatta gatgagaatt
1200
gtggctatta agagaattca ctgagagtta ttctctagat ttttagccga caattaacca
1260
ctaaaagctg ctgcttttcc aggggtggggg aggggaatgaa tacatagaaa aacaaaaaag
1320
attgttctgg attctcagtg aaaggctata ggaagtctgt tctggagaca tctacttttt
1380
agatcctgat acatcactga gtgtcatact ccactaaaag gaaactctaa ccgaaggctg
1440
gctgggtgta caatcccgtt agttggatct tcacctacag ccagattttg ctctagtggc
1500

cctcttcctg taaaccaga tggcgtcata cagaaattgt ttctttcaga agcagattgg
1560
aatctcttgg gaccatgaga ctgagtcacca atatttccac ccagggtcac gcccgttgtt
1620
gtctacttcc attttgagat ctatagtttg attatctatt attacaggaa ctgtttcttt
1680
tctttttcta ggagtgttta tgagagtgtg atattttaaa gtcagacgca gcaaaaactg
1740
tttcaggggtg aagaaagacc cctttcagcc ctgttttgca gccctgggtg ggggcatgag
1800
atagacagca agcttctgat cttgaagctt gtctagaaga cacatcttct aggtctcgtg
1860
gtcatttgggt aggtcgacct ttgagtgage gaggccacta ttgagtggat agcaagaaca
1920
ttggaaccaa agcctcggca caggcctggc actggctgta catcagctct tacaactaaa
1980
caactcaact aagcaactga aacgaaacaa aggagcattc gttctctgtt gttaggaatc
2040
attctgctct gttagggag ggctgcagga agggcagttt cctgaataaa aatctggctg
2100
cgaccagtc catgtgtctg gtaagtaagt aagtaagtaa gtgcccttg aaggatcat
2160
taagacacag ggagcatgaa cctgagatca gaagcatttc ttactaatt tagattctgc
2220
gaaatagacg gacctctcca ccccaaacc taaaacaggc caggacttgt ctctgtgctg
2280
aaagcaaata gcaagactaa ctcaagcccc agcctcttcc cactctccct gatacctaag
2340
gactgcttcc tcagctagac cagggtgggc atcagcgacg ccttctcagc tagaccaggg
2400
taggcatcag cgtcctctct ccatctctat accctctct ctcacatcag gaagatgaaa
2460
tgtgtagctc tagcggcaac ctctagccag gagccagtg gcctctcaga ttgctttttg
2520
gccaggtctc agcactgctg gcatctttac atcttactcc ttaaaaccgc ctctcgctga
2580
ggagccactg cattttgaag aatttctcag tgtctgtcag gaaagtactc ctgctcattt
2640
ggaacgccac acaccacccg cactcacctg tccaggcgaa tgagcaggtc ctgtagcttt
2700
acaaatatgc cgctgatgcc gcttctcccc aggtctctc agttttccag gacaaaaaga
2760
tttagggcct ataccctatg ggcaaacac ctaaaatgtc aacagtcaaa atgccattct
2820
ttttggccat cataagaggg agtaggtatc actgctgcat gccagttgtt tttgactaga
2880
atatgccaac cagagcttgt tggggcagga gacgtttttc cttacaagca gactgcctgt
2940
gccctgtgcc ctgtttgcta cttcactgcc atggaatgat ccgagtactg tatttcagag
3000
ctgccccctc ccagcagca aacactcgct gagtccatgt ctggcttcag gtgggaggaa
3060
atgtttcaga tgaaacttac tcaattcata ccaccctgaa atggaggaca gaggtgacaa
3120

acttcagttt aataggtttc tcaccaagtt gtatgttcca ttggcccagg attcttgac
3180
taatgggttt ctatcacatc atgtctataa atgggtgcac ttactgttt gaatttgtaa
3240
ctgaagtact ggatatttaa gtgtgagtaa tgtcttcatt agaaaatagc agaaccgctc
3300
ttgtctttta gtgtattttt caagaaaaaa ggaaaggaaa gacatcaagc agtggatcac
3360
aacatttata gcacaagaaa taacttgtat ataagcatca aaaagattaa gaatttttta
3420
atatgaaaaa tatttgcagt gattttaaag tgcttttcca gcaatgttct tagggactcc
3480
tgagacacgg ttactttatc tactggatca gtaaggcaca caattaacaa ttaacaatta
3540
atgtttattt acaaagtaaa gggaaaacct gtgtaacatg agaatttggc atgacaaaat
3600
ggagaccatt ttgtatctgc tgttgtatct tgtccgggtt gcagacgtgc actattaaag
3660
tcccaagtta atagagcaca aacccttctc gctcctccc catgtgcccc tctttttaga
3720
tgtgtataac ttaaaactcga tggctcagga aaattccact aattagaatc atgtacagta
3780
ccccaggctg ttgtccagat atacaagttt gctaattgag ttaagcctgg attattaaac
3840
acttttcccta aattattgta aacagaacag cttagagaaa ggtatttctca gtccttaata
3900
ttgtatagta gtttatgagc ccctctctaa atattggtat ttttatattc cagagatgta
3960
cccaatagaa aaaattaaaa attaatcagt atctaattta atatccataa gtatttttcc
4020
ttagatttta gtcacgtaca gtgggctatg tggatgtcac ttgtgcttca ccatagttta
4080
ccactaggtg tcaactgtggc tctgcactgc gcttgttttg tagcaaagaa cagcggcatc
4140
ccctcgggag agaggagctg cttccagggc aacaggcaag cgggctcaga ggttcaggag
4200
aaggcaacag aggcctggaa ggggtcttcg tgcactctgtg ccagttgtgc aagacgatct
4260
ctttgaacac tacatgcttt ggacttcagc caggcagagg ctggaagaag gttgaccaga
4320
gctcccttgc tctggtagag ggatgggtac atggagaagc cccttcttcc ccatgagcct
4380
ccctcctgtc agttcctctc agcctccagc ttttataact ccagaagcgt cacagttggg
4440
tggtttgatt cagagagagt tatttttcta ctgcagaaat gccttggaca aaaccagtgc
4500
tcaatgaatc tttgccacaa aatggaatag gctatcccag ggggcaagag gtgcccgc
4560
ctgtgcccag cctcctcttg atgtcccag tgcccagcag cctcgcacac cctgcctgtc
4620
tgttcctggg ctgcccattt ctcaagaaac cgacctgcaa aggcagccgg ctgctgcctc
4680
cacaccgagg gctgtgcggt cctgctgctc gctcactggg aggtgcagct ctttctcctc
4740

ttcctctagg aattccagac cgaccatcta ccatgactaa caacaatgaa caaagggctt
4800
aggggcaaga gctacctgca aagacgtgtc atggaaccct tcaccatgca atgccttgaa
4860
ctcagctctg gctgctccca agaaaagggtg gctggctggg ggcttgga caagcacaat
4920
ggggctgggtg gagccactgt gcagagctac ttgaataatc actgggtttt catcaactcc
4980
ttttgtcata cagaccactc aagggtgtaa gtgttggtaa ccttcatttc ggtgtccaaa
5040
gcctcacagc aggtgagcca ccctgagatg cttgtggcca catggtggcc acagtcagag
5100
ctttgaaagt cagtacaaa tgaacgcata attggacacc aaaaatcaag tggtactttc
5160
atgtttcttc accccatcat ctcatcgct cctgtgact ctgataccga cgctgagctg
5220
acttgccagg ctgccgctgg acgcgtagag atcaggccag cgccgcgctc atttttccag
5280
gtagacctac tctgtggaac ggaagtgcc tagctgcttt gttttttag cacttgctgg
5340
ctgaattttt cttttgctaa tcgctaacca gaaagtctgg ttagaggggg ctcaactcaa
5400
tccctttggt cccagcgcc agacaagagt taattctgga aaattcagta cttgaatgta
5460
cctgccttat tgcataccaa ttactgggg ggaaaaaaaa agttaagaga tgccggctcc
5520
agatctccac ttcattcaca ggtgattttg gaaatcctgt aagttacact tcctgttctg
5580
gttttgttt gtttttgtt tcctttggt gattcctgct gagtgaggcc agttcctcat
5640
caggctcagg gcagggtgct ttccaggcgt ggctccttt ccatctagca cagcatcttt
5700
gtctctgttc tgtctctcc aaatccaaga tgattttaat tagtacagac atgtacagtc
5760
tacaattaa gagtgatttg tactaatatg attttgattc ttctctctct ttgtgtcct
5820
ttcaagacac ttgtggaaa aagctttaat gcacttagtt ttcttttagg ttttctatga
5880
ctcagatgta aaggactttc tctgtacagt atattatcca atgcatgttt gttctctctc
5940
ctgatataatt gaacaccaca cagttgtgaa gccgtgcagt ggggatgccc cacacccac
6000
agaggcatct acccctgtgt ataaggaaag acattttcct ttgtgtact tgcttgagca
6060
gttttattgt ctgtacatgt gagctgtgtg agatagatgt gaaaagttca aatgaatgca
6120
ttttcctgcc ccatgtatac agattgtcat ctgtacaagg aactgtatgt atgaaagcaa
6180
atgtacttat ttataaatgg ctaacacttg gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
6240
aaaa
6244

<210> 5126

<211> 117
 <212> PRT
 <213> Homo sapiens

<400> 5126
 Met Phe Lys Arg Arg Phe Val Gly Val Arg Pro Ile Cys Phe His Cys
 1 5 10 15
 Thr Phe Ser Gly Leu Val Ser Thr Phe Glu Val Val Leu Trp Leu Asn
 20 25 30
 Phe Ser Cys Ser Phe Cys Val Val Phe Arg Gly Gly Ser Pro His Ala
 35 40 45
 Glu Ile Leu Cys Met Gln Pro Thr Gly Lys Arg Pro Pro Gly Ser Gln
 50 55 60
 Asp Phe Ser Phe Ser Cys Leu Cys Pro Ala Thr Cys Ser Leu Pro Leu
 65 70 75 80
 Phe Arg Cys Gln Arg Gly Asp Phe Arg Ala Val Cys Phe Asn Pro Gly
 85 90 95
 Arg Ser Asp Thr Leu Val Ser Phe Phe Gln Glu Thr Ile Ala Phe Thr
 100 105 110
 Asp Val Leu Val Val
 115

<210> 5127
 <211> 400
 <212> DNA
 <213> Homo sapiens

<400> 5127
 ggtaccgcgc caatgcctct cgggaggccc tgcggaccgg ctctgggggtg cgttttcccg
 60
 agttcgtcca gtacctgctg gacgtgcacc ggcccgtggg gatggacatt cactgggacc
 120
 atgtcagccg gctctgcagc ccctgcctca tcgactacga tttcgtaggc aagttcgaga
 180
 gcatggagga cgatgccaac ttcttctga gcctcatccg cgcgccgcgg aacctgacct
 240
 tcccccggtt caaggaccgg cactcgcagg aggcgcggac cacagcgagg atcgcccacc
 300
 agtacttcgc ccaactctcg gccctgcaaa ggcagcgcac ctacgacttc tactacatgg
 360
 attacctgat gttcaactat tccaagccct ttgcagatct
 400

<210> 5128
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 5128
 Gly Thr Ala Pro Met Pro Leu Gly Arg Pro Cys Gly Pro Ala Leu Gly
 1 5 10 15
 Cys Val Phe Pro Ser Ser Ser Ser Thr Cys Trp Thr Cys Thr Gly Pro
 20 25 30
 Trp Gly Trp Thr Phe Thr Gly Thr Met Ser Ala Gly Ser Ala Ala Pro

35 40 45
Ala Ser Ser Thr Thr Ile Ser
50 55

<210> 5129
<211> 745
<212> DNA
<213> Homo sapiens

<400> 5129
accggtgaac aggatcccc aggaaatggg gaggaagcct agagagaagg gccagatcgt
60
aggccaagac ccccgctgt gtctctgttc actggcagcg gagcgaggag agaggtgtgg
120
gctgacctga aaccagcacc tcctgtgtcc ccagctgagc cctgcacggg attggccaaa
180
tgtgctgctc tgcggccgcc ctgctgcccc cccctgggt ggagctgggg tctgggacag
240
tgaagatggc tcccacagct gaggggcact gggtgccaag agcctgccag accctgggccc
300
accagaaaac atgctctgat agtgcagctg tgagcactgg cctgcgtccc ctccaccag
360
ccgacctatg aggctcaggg tgcttggggg cccatcaagg acatagtcct agctgccgac
420
tcatccaggc agcctgcaca acccctggct cccctccacc ggccacctgc cccctgcac
480
aggcaggatc cggcctcgcc caccacagg cctgcacctc cgggcccacg gcagcaagat
540
tcctatcttg gggatgcttt cctccctttg ccgagagacc cccccccc acaccttgcc
600
tctcttcaag gagccgaaaa tgcagctgcc gactgatttg ctgtggagct aaaaataact
660
gccgggctcc agccagggcc caggaaaata tcccattgct aggagacaac cgttgccggg
720
agaccgcat tgctaggcga cgcgt
745

<210> 5130
<211> 111
<212> PRT
<213> Homo sapiens

<400> 5130
Met Ala Val Ser Arg Gln Arg Leu Ser Pro Ser Asn Gly Ile Phe Ser
1 5 10 15
Trp Ala Leu Ala Gly Ala Arg Gln Leu Phe Leu Ala Pro Gln Gln Ile
20 25 30
Ser Arg Gln Leu His Phe Arg Leu Leu Glu Glu Arg Gln Gly Val Gly
35 40 45
Gly Val Gly Leu Ser Ala Lys Gly Gly Lys His Pro Gln Asp Arg Asn
50 55 60
Leu Ala Ala Val Gly Pro Glu Val Gln Ala Cys Gly Trp Ala Arg Pro
65 70 75 80
Asp Pro Ala Cys Ala Gly Gly Gln Val Ala Gly Gly Gly Glu Pro Gly

				85				90					95	
Val	Val	Gln	Ala	Ala	Trp	Met	Ser	Arg	Gln	Leu	Gly	Leu	Cys	Pro
			100					105					110	

```
<210> 5131
<211> 789
<212> DNA
<213> Homo sapiens
```

```

<400> 5131
atgaggaacc tgcagctcag gttcgagaag ggccgcacat acacctacat cgggtgaggtg
60
ctggtgtccg tgaaccacct ccaggagctg cccctgtatg ggccctgaggc catcgcccag
120
taccagggcc gtgagctcta tgagcggcca ccccatctct atgctgtggc caacgcgcgc
180
tacaaggcaa tgaagcaccc gtccaggagc acctgcacat tcatctcagg ggagagtggg
240
gcagggaaga cagaagccag taagcacatc atgcagtaca tcgctgctgt caccaatcca
300
agccagaggg ctgaggtgga gagggtcaag gacgtgctgc tcaagtccac ctgtgtgctg
360
gaggcctttg gcaatgcccg caccaaccgc aatcacaact ccagccgctt tggcaagtac
420
atggacatca actttgactt caagggggac ccgatcggag gacacatcca cagctacctt
480
ctggagaagt ctcggttcct caagcagcac gtgggtgaaa gaaacttcca cgccttctac
540
caattgctga gaggcagtga ggacaagcag ctgcataaac tgcaacttga gagaaacctt
600
gctgtataca atttcacaca ccaggaggca ggactcaaca tgactgtgca cagtgccttg
660
gacagtgatg agcagagcca ccaggcagtg accgaggcca tgagggtcat cggcttcagt
720
cctgaagagg tggagtctgt gcacgcacac ctggctgcca tattgcacct gggaaacatc
780
gagtttgtg
789

```

```
<210> 5132
<211> 263
<212> PRT
<213> Homo sapiens
```

```

<400> 5132
Met Arg Asn Leu Gln Leu Arg Phe Glu Lys Gly Arg Ile Tyr Thr Tyr
  1             5             10             15
Ile Gly Glu Val Leu Val Ser Val Asn Pro Tyr Gln Glu Leu Pro Leu
      20             25             30
Tyr Gly Pro Glu Ala Ile Ala Gln Tyr Gln Gly Arg Glu Leu Tyr Glu
      35             40             45
Arg Pro Pro His Leu Tyr Ala Val Ala Asn Ala Ala Tyr Lys Ala Met
      50             55             60
Lys His Arg Ser Arg Asp Thr Cys Ile Val Ile Ser Gly Glu Ser Gly

```

```
<210> 5133
<211> 581
<212> DNA
<213> Homo sapiens
```

<210> 5134

<211> 157
 <212> PRT
 <213> Homo sapiens

<400> 5134
 Met Asn Arg Phe Asp Arg Pro Asp Arg Asn Val Arg Gln Pro Gln Glu
 1 5 10 15
 Gly Phe Trp Lys Arg Pro Pro Gln Arg Trp Ser Gly Gln Glu His Tyr
 20 25 30
 His Leu Ser His Pro Asp His Tyr His His His Gly Lys Ser Asp Leu
 35 40 45
 Ser Arg Gly Ser Pro Tyr Arg Glu Ser Pro Leu Gly His Phe Glu Ser
 50 55 60
 Tyr Gly Gly Met Pro Phe Phe Gln Ala Gln Lys Met Phe Val Asp Val
 65 70 75 80
 Pro Glu Asn Thr Val Ile Leu Asp Glu Met Thr Leu Arg His Met Val
 85 90 95
 Gln Asp Cys Thr Ala Val Lys Thr Gln Leu Leu Lys Leu Lys Arg Leu
 100 105 110
 Leu His Gln His Asp Gly Ser Gly Ser Leu His Asp Ile Gln Leu Ser
 115 120 125
 Leu Pro Ser Ser Pro Glu Pro Glu Asp Gly Asp Lys Val Tyr Lys Asn
 130 135 140
 Glu Asp Leu Leu Asn Glu Ile Lys Gln Leu Lys Asp Glu
 145 150 155

<210> 5135
 <211> 1696
 <212> DNA
 <213> Homo sapiens

<400> 5135
 nnctgcgagc gcctgcccga tgcgcgcgcg cctctccgca cgatgttccc ctgcgcggagg
 60
 aaagcggcgc agctgccctg ggaggacggc aggtccgggt tgctctccgg cggcctccct
 120
 cggaagtgtt ccgtcttcca cctgttcgtg gcctgcctct cgctgggctt cttctcccta
 180
 ctctggctgc agctcagctg ctctggggac gtggcccggg cagtcagggg acaagggcag
 240
 gagacctcgg gccctccccg cgctgcccc ccagagccgc cccctgagca ctgggaagaa
 300
 gacgcatacct ggggccccca ccgcctggca gtgctggtgc ccttccgcga acgcttcgag
 360
 gagctcctgg tcttcgtgcc ccacatgcgc cgcttctga gcaggaagaa gatccggcac
 420
 cacatctacg tgctcaacca ggtggaccac ttcaggttca accgggcagc gtcatacaac
 480
 gtgggcttcc tggagagcag caacagcacg gactacattg ccatgcacga cgttgacctg
 540
 ctccctctca acgaggagct ggactatggc tttctgagg ctggggccctt ccacgtggcc
 600
 tccccggagc tccacctct ctaccactac aagacctatg tcggcgccat cctgctgctc
 660

tccaagcagc actaccggct gtgcaatggg atgtccaacc gcttctgggg ctggggccgc
 720
 gaggacgacg agttctaccg gcgcattaag ggagctgggc tccagctttt ccgcccctcg
 780
 ggaatcaciaa ctgggtacaa gacatttcgc cacctgcacg acccagcctg gcggaagagg
 840
 gaccagaagc gcatcgcagc tcaaaaacag gagcagttca aggtggacag ggagggaggc
 900
 ctgaacactg tgaagtacca tgtggcttcc cgcactgccc tgtctgtggg cggggccccc
 960
 tgcactgtcc tcaacatcat gttggactgt gacaagaccg ccacaccctg gtgcacattc
 1020
 agctgagctg gatggacagt gaggaagcct gtacctacag gccatattgc tcaggctcag
 1080
 gacaaggcct caggtcgtgg gcccgactct gacaggatgt ggagtggcca ggaccaagac
 1140
 agcaagctac gcaattgcag ccaccggccc gccaaaggcag gcttgggctg ggccaggaca
 1200
 cgtgggggtgc ctgggacgct gcttgccatg cacagtgatc agagagaggc tgggggtgtgt
 1260
 cctgtccggg accccccctg ccttctgtct caccctactc tgacctcctt cacgtgcccc
 1320
 ggctgtggg tagtggggag ggctgaacag gacaacctct catcaccccc acttttgttc
 1380
 cttctctgctg ggctgcctcg tgcagagaca cagtgtaggg gccatgcagc tggcgtaggt
 1440
 ggcaagtggt cctgggtgagg gttaggactt cagaaaccag agcacaagcc ccacagaggg
 1500
 ggaacagcca gcaccgctct agctgggtgt tgccatgccg gaatgtgggc ctagtgttgc
 1560
 cagatcttct gatttttctga aagaaactag aatgctggat tcttaagtga tatcttctga
 1620
 ttttttaaat gatagcacct aaatgaaact ttcaaaaagt atggcaggcc agacaaaaaa
 1680
 aaaaaaaaaa aaaaaa
 1696

<210> 5136

<211> 341

<212> PRT

<213> Homo sapiens

<400> 5136

Xaa	Cys	Glu	Arg	Leu	Pro	His	Ala	Pro	Pro	Pro	Leu	Arg	Thr	Met	Phe
1				5					10					15	
Pro	Ser	Arg	Arg	Lys	Ala	Ala	Gln	Leu	Pro	Trp	Glu	Asp	Gly	Arg	Ser
			20					25					30		
Gly	Leu	Leu	Ser	Gly	Gly	Leu	Pro	Arg	Lys	Cys	Ser	Val	Phe	His	Leu
		35					40					45			
Phe	Val	Ala	Cys	Leu	Ser	Leu	Gly	Phe	Phe	Ser	Leu	Leu	Trp	Leu	Gln
	50					55					60				
Leu	Ser	Cys	Ser	Gly	Asp	Val	Ala	Arg	Ala	Val	Arg	Gly	Gln	Gly	Gln
65					70				75					80	
Glu	Thr	Ser	Gly	Pro	Pro	Arg	Ala	Cys	Pro	Pro	Glu	Pro	Pro	Pro	Glu


```
<210> 5137
<211> 3090
<212> DNA
<213> Homo sapiens
```

4317

ccctttccgt agttgtccca aatggagctg gaattggatg ctggtgacca agacctgctg
480
gccttctctg tagaggaaag tggagatttg gggacggcac ccgatgaggc cgtgagggcc
540
ccactggact gggcgctgcc gctttctgag gtaccgagcg actgggaagt agatgatttg
600
ctgtgctccc tgctgagtcc cccagcgtcg ttgaacattc tcagctcttc caaccctgc
660
cttgtccacc atgaccacac ctactccctc ccacgggaaa ctgtctctat ggatctagag
720
agtgaagct gtagaaaaga ggggaccag atgactccac agcatatgga ggagctggca
780
gagcaggaga ttgctaggct agtactgaca gatgaggaga agagtctatt ggagaaggag
840
gggcttattc tgcctgagac acttcctctc actaagacag aggaacaaat tctgaaacgt
900
gtgcggagga agattcgaaa taaaagatct gctcaagaga gccgcaggaa aaagaagggtg
960
tatgttgggg gtttagagag cagggctctg aaatacacag cccagaatat ggagcttcag
1020
aacaagtag agcttctgga ggaacagaat ttgtcccttc tagatcaact gaggaaactc
1080
caggccatgg tgattgagat atcaaacaaa accagcagca gcagcacctg catcttggtc
1140
ctactagtct ccttctgcct cctccttgta cctgctatgt actcctctga cacaaggggg
1200
agcctgccag ctgagcatgg agtggtgtcc cgccagcttc gtgccctccc cagtgaggac
1260
ccttaccagc tggagctgcc tgccctgcag tcagaagtgc cgaaagacag cacacaccag
1320
tggttggacg gctcagactg tgtactccag gccctggca acacttctg cctgctgcat
1380
tacatgcctc aggtcccag tgcagagcct ccctggagt ggccattccc tgacctcttc
1440
tcagagcctc tctgccgagg tccatcctc ccctgcagg caaatctcac aaggaaggga
1500
ggatggcttc ctactgtag cccctctgtc attttgcagg acagatactc aggctagata
1560
tgaggatatg tggggggtct cagcaggagc ctggggggct ccccatctgt gtccaaataa
1620
aaagcgggtg gcaagggtg gccgcagctc ctgtgccctg tcaggacgac tgagggtca
1680
aacacaccac acttaatggc tttctgggtc ttttatttgt acccatgtgt ctgtcacacc
1740
atgaatgtac ctggggaaat caactgacct cctgaacat ttcacgcagt cagggaacag
1800
gtgaggaaag aaataaataa gtgattctaa tgctgectag gtcacctca accccattt
1860
actggcacia ttgggtggag agaagggaag gggatgatt gtcctgatgg ctcaggggtg
1920
caggaggttc agaggggaag gaggaaaggc caggctggag gctgggctgt tagcacttcc
1980
ctccacagt tcagacggct cactctgggc tcagggttgc catggcttcc tttggtccaa
2040

acataggccc tgccttagt cctgtgccct gtttgacttt tggccaggag gcctttttgt
 2100
 gctgtgctg ttgcagggt agctgcatgg cccatatgct cagtggccgc atgtaggcca
 2160
 gtgagcggaa cactcgctgc tggcagtatg cctctgggggt ctggaaggcc agaccaggc
 2220
 gctccacac ggtacggtag cagccttcag ctgtctggaa gccctcccaa gtcaggccct
 2280
 cttggatcat ggtagctgcc agcccgtaga ccacaccac ccagacttca tcagactgca
 2340
 cactggattt atcagggaca ccatggggct gcattccatt cacagcccc atggccctc
 2400
 ctgcaaaggc ctggacgttc agctcaaaga tagtttgag agcacggacc acatgttggg
 2460
 taggaaacac ctcaagtgtc cttctccta ggccacaggc cttcaggaac cactgtccag
 2520
 cacactggtc agacataaca ctacgagact gaggccgaga gctgctgtca tagttgtaat
 2580
 agcggccatt ccacagcagt ctctcatagg cttcttggcc ccggctgagg atagaagaaa
 2640
 acttatcctg gatgtcctgt gcccacaca gacagccat ctggaccatc acagccacag
 2700
 ctgccagcca cagccctcca cagtaagcac tggggcctgt ggtcacccat ccatcatagg
 2760
 tctggctctg atagcctcca tttcaatga gtccatcatg gtccttgtca aacttcattt
 2820
 cagattccat cacagcctgc agcacaact tcaggttcag gtccttccaa tcagcagtat
 2880
 catggattaa atatgcattg acgcggagcc atggttcatc atctgtggga gaggagggga
 2940
 cttgggtcac ttgcattggt ggatagggtg gagggtgcaa aagttgaggg agggaaagctg
 3000
 accttgggggt ggacttttac ctgggttccc aatatcatgg gggatgacgt tctcctttt
 3060
 cacaggtgcc atcacccac tcatcangta
 3090

<210> 5138

<211> 371

<212> PRT

<213> Homo sapiens

<400> 5138

Met	Glu	Leu	Glu	Leu	Asp	Ala	Gly	Asp	Gln	Asp	Leu	Leu	Ala	Phe	Leu
1				5				10						15	
Leu	Glu	Glu	Ser	Gly	Asp	Leu	Gly	Thr	Ala	Pro	Asp	Glu	Ala	Val	Arg
			20					25					30		
Ala	Pro	Leu	Asp	Trp	Ala	Leu	Pro	Leu	Ser	Glu	Val	Pro	Ser	Asp	Trp
			35				40					45			
Glu	Val	Asp	Asp	Leu	Leu	Cys	Ser	Leu	Leu	Ser	Pro	Pro	Ala	Ser	Leu
			50			55				60					
Asn	Ile	Leu	Ser	Ser	Ser	Asn	Pro	Cys	Leu	Val	His	His	Asp	His	Thr
65					70					75				80	
Tyr	Ser	Leu	Pro	Arg	Glu	Thr	Val	Ser	Met	Asp	Leu	Glu	Ser	Glu	Ser

85 90 95
 Cys Arg Lys Glu Gly Thr Gln Met Thr Pro Gln His Met Glu Glu Leu
 100 105 110
 Ala Glu Gln Glu Ile Ala Arg Leu Val Leu Thr Asp Glu Glu Lys Ser
 115 120 125
 Leu Leu Glu Lys Glu Gly Leu Ile Leu Pro Glu Thr Leu Pro Leu Thr
 130 135 140
 Lys Thr Glu Glu Gln Ile Leu Lys Arg Val Arg Arg Lys Ile Arg Asn
 145 150 155 160
 Lys Arg Ser Ala Gln Glu Ser Arg Arg Lys Lys Lys Val Tyr Val Gly
 165 170 175
 Gly Leu Glu Ser Arg Val Leu Lys Tyr Thr Ala Gln Asn Met Glu Leu
 180 185 190
 Gln Asn Lys Val Gln Leu Leu Glu Glu Gln Asn Leu Ser Leu Leu Asp
 195 200 205
 Gln Leu Arg Lys Leu Gln Ala Met Val Ile Glu Ile Ser Asn Lys Thr
 210 215 220
 Ser Ser Ser Ser Thr Cys Ile Leu Val Leu Leu Val Ser Phe Cys Leu
 225 230 235 240
 Leu Leu Val Pro Ala Met Tyr Ser Ser Asp Thr Arg Gly Ser Leu Pro
 245 250 255
 Ala Glu His Gly Val Leu Ser Arg Gln Leu Arg Ala Leu Pro Ser Glu
 260 265 270
 Asp Pro Tyr Gln Leu Glu Leu Pro Ala Leu Gln Ser Glu Val Pro Lys
 275 280 285
 Asp Ser Thr His Gln Trp Leu Asp Gly Ser Asp Cys Val Leu Gln Ala
 290 295 300
 Pro Gly Asn Thr Ser Cys Leu Leu His Tyr Met Pro Gln Ala Pro Ser
 305 310 315 320
 Ala Glu Pro Pro Leu Glu Trp Pro Phe Pro Asp Leu Phe Ser Glu Pro
 325 330 335
 Leu Cys Arg Gly Pro Ile Leu Pro Leu Gln Ala Asn Leu Thr Arg Lys
 340 345 350
 Gly Gly Trp Leu Pro Thr Gly Ser Pro Ser Val Ile Leu Gln Asp Arg
 355 360 365
 Tyr Ser Gly
 370

<210> 5139

<211> 1968

<212> DNA

<213> Homo sapiens

<400> 5139

gtctgcccgc ttctggttcc caccgaagta agcctgctgt caatggagga ggacattgat
 60
 acccgcaaaa tcaacaacag ttctctgctg gaccacagct atgcgaccga agctgacatt
 120
 atctctacgg tagaattcaa ccacacggga gaattactag cgacagggga caaggggggt
 180
 cgggttgtaa tatttcaacg agagcaggag agtaaaaatc aggttcatcg taggggtgaa
 240
 tacaatgttt acagcacatt ccagagccat gaaccgaggt tcgattacct gaagagttaa
 300

gaaatagaag aaaaaatcaa taaaataaga tggctccccc agcagaatgc agcttacttt
360
cttctgtcta ctaatgataa aactgtgaag ctgtggaaag tcagcgagcg tgataagagg
420
ccagaaggct acaatctgaa agatgaggag ggccggctcc gggatcctgc caccatcaca
480
accctgcggg tgctgtcct gagacccatg gacctgatgg tggaggccac cccacgaaga
540
gtatttgcca acgcacacac atatcacatc aactccatat ctgtcaacag cgactatgaa
600
acctacatgt ccgctgatga cctgaggatt aacctatgga actttgaaat aaccaatcaa
660
agttttaata ttgtggacat taagccagcc aacatggagg agctcacgga ggtgatcaca
720
gcagccgagt tccaccccca tcattgcaac accttcgtgt acagcagcag caaagggaca
780
atccggctgt gtgacatgcg ggcattctgcc ctgtgtgaca ggcacaccaa gttttttgaa
840
gagccggaag atccaagcaa cagatcattt ttctctgaaa ttatctcttc gatttcggat
900
gtgaagtcca gccacagtgg gaggtatatc atgaccagag actacttgac cgtcaaagtc
960
tggtatctca acatggagag caggccggtg gagaccacc aggttcatga ctacctgcgc
1020
agcaagctct gctctctcta tgagaacgac tgcattcttg acaagtttga gtgtgtgtgg
1080
aatgggtcag acagtgtcat catgacaggc tcctataaca acttcttcag gatgtttgat
1140
agagacacca agcgtgatgt gacccttgag gcttcgaggg aaaacagcaa gccccgggt
1200
atcctcaaac cccgaaaagt gtgtgtgggg ggcaagcgga gaaaagacga gatcagtgtc
1260
gacagtctgg acttttagcaa aaagatcctg cacacagcct ggcaccccggt ggacaatgtc
1320
attgccgtgg ctgccaccaa taactgttac atattccagg acaaaatcaa ctagagacgc
1380
gaacgtgagg accaagtctt gtcttgcata gttaagccgg acatttttct gtcagagaaa
1440
agggatcatt gtccgctcca ttaagaacag tgacgcacct gctacttccc ttcacagaca
1500
caggagaaag ccgcctccgc tggaggcccg gtgtggttcc gcctcggcga ggcgcgagac
1560
aggcgtgct gctcacgtgg agacgctctc gaagcagagt tgacggacac tgctcccaaa
1620
aggtcattac tcagaataaa tgtatttatt tcagtccgag ccttccttcc caatttatag
1680
accaaaaaat taacatccaa gagaaaagt attgtcagat accgctcttt ctccaacttt
1740
ccctctttct ctgccatcac acttgggcct tcaactgcgc gtggtgtggc caccgtccgt
1800
gtcctctcgg ccttcctccg agtccagggt gactctgtgg atgtgtggat gtggcccag
1860
caggctcagg cggccccact caccacagc atccgcccgc accccttcgg gtgtgagcgc
1920

tcaataaaaa caacacacta taaagtgttt ttaaattccaa aaaaaaaaa
1968

<210> 5140

<211> 443

<212> PRT

<213> Homo sapiens

<400> 5140

Met Glu Glu Asp Ile Asp Thr Arg Lys Ile Asn Asn Ser Phe Leu Arg
1 5 10 15
Asp His Ser Tyr Ala Thr Glu Ala Asp Ile Ile Ser Thr Val Glu Phe
20 25 30
Asn His Thr Gly Glu Leu Leu Ala Thr Gly Asp Lys Gly Gly Arg Val
35 40 45
Val Ile Phe Gln Arg Glu Gln Glu Ser Lys Asn Gln Val His Arg Arg
50 55 60
Gly Glu Tyr Asn Val Tyr Ser Thr Phe Gln Ser His Glu Pro Glu Phe
65 70 75 80
Asp Tyr Leu Lys Ser Leu Glu Ile Glu Glu Lys Ile Asn Lys Ile Arg
85 90 95
Trp Leu Pro Gln Gln Asn Ala Ala Tyr Phe Leu Leu Ser Thr Asn Asp
100 105 110
Lys Thr Val Lys Leu Trp Lys Val Ser Glu Arg Asp Lys Arg Pro Glu
115 120 125
Gly Tyr Asn Leu Lys Asp Glu Glu Gly Arg Leu Arg Asp Pro Ala Thr
130 135 140
Ile Thr Thr Leu Arg Val Pro Val Leu Arg Pro Met Asp Leu Met Val
145 150 155 160
Glu Ala Thr Pro Arg Arg Val Phe Ala Asn Ala His Thr Tyr His Ile
165 170 175
Asn Ser Ile Ser Val Asn Ser Asp Tyr Glu Thr Tyr Met Ser Ala Asp
180 185 190
Asp Leu Arg Ile Asn Leu Trp Asn Phe Glu Ile Thr Asn Gln Ser Phe
195 200 205
Asn Ile Val Asp Ile Lys Pro Ala Asn Met Glu Glu Leu Thr Glu Val
210 215 220
Ile Thr Ala Ala Glu Phe His Pro His His Cys Asn Thr Phe Val Tyr
225 230 235 240
Ser Ser Ser Lys Gly Thr Ile Arg Leu Cys Asp Met Arg Ala Ser Ala
245 250 255
Leu Cys Asp Arg His Thr Lys Phe Phe Glu Glu Pro Glu Asp Pro Ser
260 265 270
Asn Arg Ser Phe Phe Ser Glu Ile Ile Ser Ser Ile Ser Asp Val Lys
275 280 285
Phe Ser His Ser Gly Arg Tyr Ile Met Thr Arg Asp Tyr Leu Thr Val
290 295 300
Lys Val Trp Asp Leu Asn Met Glu Ser Arg Pro Val Glu Thr His Gln
305 310 315 320
Val His Asp Tyr Leu Arg Ser Lys Leu Cys Ser Leu Tyr Glu Asn Asp
325 330 335
Cys Ile Phe Asp Lys Phe Glu Cys Val Trp Asn Gly Ser Asp Ser Val
340 345 350
Ile Met Thr Gly Ser Tyr Asn Asn Phe Phe Arg Met Phe Asp Arg Asp

355		360		365
Thr Lys Arg Asp Val	Thr Leu Glu Ala Ser Arg	Glu Asn Ser Lys Pro		
370	375	380		
Arg Ala Ile Leu Lys	Pro Arg Lys Val Cys Val	Gly Gly Lys Arg Arg		
385	390	395	400	
Lys Asp Glu Ile Ser	Val Asp Ser Leu Asp Phe	Ser Lys Lys Ile Leu		
	405	410	415	
His Thr Ala Trp His	Pro Val Asp Asn Val Ile	Ala Val Ala Ala Thr		
	420	425	430	
Asn Asn Leu Tyr Ile	Phe Gln Asp Lys Ile Asn			
435	440			

<210> 5141

<211> 928

<212> DNA

<213> Homo sapiens

<400> 5141

```

ngcgcgccgg ccgatagcg agccgcgctg gcggcggcgg tggccgcgat gatggagatc
60
cagatggacg agggcggcgg cgtggtggtg taccaggacg actactgctc cggctcgggtg
120
atgtcggagc ggggtgtcggg cctggcgggc tccatctacc gcgagttcga gcgcctcatc
180
cactgctacg acgaggaggt ggtcaaggag ctcatgcccgc tgggtggtgaa cgtgctggag
240
aacctagact cgggtgctcag cgagaaccag gacacagagg tggagctgga gctgctgcgc
300
gaggacaacg agcagctgct caccagctac gacgctgaga aggcgctgcg caggcaggcg
360
gaggagaaat tcattgagtt tgaagatgct ctggaacaag agaagaaaga gctgcaaata
420
caggtggagc actacgagtt ccagacgcgc cagctggagc tgaaggccaa gaactatgcc
480
gatcagattt cccggttgga ggagcgggag tcggagatga agaaggagta caatgccctg
540
caccagcggc acacagagat gatacagacc tacgtggagc acattgagag gtccaagatg
600
cagcaggtcg gaggaaacag ccagaccgag agcagcctgc cggggcggag caggaaggag
660
cgccccacct ccctgaacgt gttccccctg gctgacggca cggtagctgc acagatcggg
720
ggcaagctcg tgctgcggg ggaccactgg cacctgagtg acctcggcca gctgcagtcc
780
agctccagct accaggtttt gtagccgtgc cgtggagtga gaggttcctc ccctgttgc
840
ggtgttcccc gtttactggt ggccgggagct tcgtctgcag gcagcccttc acgactctct
900
gggccactcg ccctctccct tcacgcgt
928

```

<210> 5142

<211> 227

<212> PRT

<213> Homo sapiens

<400> 5142

```

Met Ser Glu Arg Val Ser Gly Leu Ala Gly Ser Ile Tyr Arg Glu Phe
1          5          10          15
Glu Arg Leu Ile His Cys Tyr Asp Glu Glu Val Val Lys Glu Leu Met
20          25          30
Pro Leu Val Val Asn Val Leu Glu Asn Leu Asp Ser Val Leu Ser Glu
35          40          45
Asn Gln Glu His Glu Val Glu Leu Glu Leu Leu Arg Glu Asp Asn Glu
50          55          60
Gln Leu Leu Thr Gln Tyr Glu Arg Glu Lys Ala Leu Arg Arg Gln Ala
65          70          75          80
Glu Glu Lys Phe Ile Glu Phe Glu Asp Ala Leu Glu Gln Glu Lys Lys
85          90          95
Glu Leu Gln Ile Gln Val Glu His Tyr Glu Phe Gln Thr Arg Gln Leu
100          105          110
Glu Leu Lys Ala Lys Asn Tyr Ala Asp Gln Ile Ser Arg Leu Glu Glu
115          120          125
Arg Glu Ser Glu Met Lys Lys Glu Tyr Asn Ala Leu His Gln Arg His
130          135          140
Thr Glu Met Ile Gln Thr Tyr Val Glu His Ile Glu Arg Ser Lys Met
145          150          155          160
Gln Gln Val Gly Gly Asn Ser Gln Thr Glu Ser Ser Leu Pro Gly Arg
165          170          175
Ser Arg Lys Glu Arg Pro Thr Ser Leu Asn Val Phe Pro Leu Ala Asp
180          185          190
Gly Thr Val Arg Ala Gln Ile Gly Gly Lys Leu Val Pro Ala Gly Asp
195          200          205
His Trp His Leu Ser Asp Leu Gly Gln Leu Gln Ser Ser Ser Ser Tyr
210          215          220
Gln Val Leu
225

```

<210> 5143

<211> 1666

<212> DNA

<213> Homo sapiens

<400> 5143

```

ncccgccac agttccgacg aaaaatggcg ggggttcctg agttgggtggt ccttgaccct
60
ccatgggaca aggagctcgc ggctggcaca gagagccagg ccttggtctc cgccactccc
120
cgagaagact ttcgggtgcg ctgcacctcg aagcgggctg tgaccgaaat gctacaactg
180
tgcgggccgct tcgtgcaaaa gtcgggggac gctctgccgg aggagattcg ggagcccgt
240
ctgcgagatg cgagtgaggac ttttgaatca gctgtgcaag agaatatcag cattaatggg
300
caagcatggc aggaagcttc agataattgt tttatggatt ctgacatcaa agtacttgaa
360
gatcagtttg atgaaatcat agtagatata gccacaaaac gtaagcagta tcccagaaag
420

```


atcctggaat gtgtcatcaa aaccataaaa gcaaaacaag aaattctgaa gcagtaccac
 480
 cctgtgttac atccactgga cctaaaatat gaccctgac cagccctca tatggaaaat
 540
 ttgaaatgca gaggggaaac agtagcaaag gagatcagtg aagccatgaa gtccttgcct
 600
 gcattaattg aacaaggaga gggattttcc caagttctca ggatgcagcc tgttatccac
 660
 ctccagagga ttcaccaaga agtcttttcc agttgtcata ggaaaccaga tgctaaacct
 720
 gagaacttta taacacagat agaaaccaca ccaacagaga ctgcttccag gaaaacctct
 780
 gacatggtac tgaaaagaaa gcaaaactaaa gactgcccc agagaaaatg gtatccattg
 840
 cggccaaaga aaattaatct tgatacatga gctctttctg tttattttgg gagttgaaa
 900
 taggcacat caacatttag attacagcct aattaatacc tagataagac ttcatttgaa
 960
 ataagaaata actcttttac tagtgattca tttatacaga tatagtatct ctgtgcgggg
 1020
 atatgatata atattgtatt tccttactgt tttatctatt gtaaataaaa agcattttta
 1080
 aaagtattga cacaaagccc atcagtgggc attaaaaata ttaaaagtgc agacttttac
 1140
 tgtccttaag tgccatcaac tctcagctcc cttgtagctt ttgtgggatt taacaagtaa
 1200
 caaattctgt tgtgtttccc tggatatacat ctttctagga aaaaaaaaaa aagagagaga
 1260
 gctgtataat gatttttctg ttacatgctg aaaagtaatt atcagttctg cacagcagca
 1320
 gatgcagggt ttttttttaa agatgtagtt tgatttatca aattaatgtg ctgatgataa
 1380
 tactggcttt gactttgtta ctccatgttc agctaattta ggtttgtgag attaatctta
 1440
 ggattttttg ttgtgtaaga caatgataac tattatttgt gcaacattac tctttgaaat
 1500
 aaaaattggc atgtagccaa tgtttctctg ccacactcac ttttttctat agaccattaa
 1560
 cataatttga ctggaacta atggtttctt tttagggttt cttatttatt tctttacaaa
 1620
 tcattccagt tcaaaatata tatcagatta atacactgaa aaaaaa
 1666

<210> 5144

<211> 218

<212> PRT

<213> Homo sapiens

<400> 5144

Leu	Pro	Glu	Glu	Ile	Arg	Glu	Pro	Ala	Leu	Arg	Asp	Ala	Gln	Trp	Thr
1				5				10					15		
Phe	Glu	Ser	Ala	Val	Gln	Glu	Asn	Ile	Ser	Ile	Asn	Gly	Gln	Ala	Trp
			20					25					30		
Gln	Glu	Ala	Ser	Asp	Asn	Cys	Phe	Met	Asp	Ser	Asp	Ile	Lys	Val	Leu

35 40 45
 Glu Asp Gln Phe Asp Glu Ile Ile Val Asp Ile Ala Thr Lys Arg Lys
 50 55 60
 Gln Tyr Pro Arg Lys Ile Leu Glu Cys Val Ile Lys Thr Ile Lys Ala
 65 70 75 80
 Lys Gln Glu Ile Leu Lys Gln Tyr His Pro Val Val His Pro Leu Asp
 85 90 95
 Leu Lys Tyr Asp Pro Asp Pro Ala Pro His Met Glu Asn Leu Lys Cys
 100 105 110
 Arg Gly Glu Thr Val Ala Lys Glu Ile Ser Glu Ala Met Lys Ser Leu
 115 120 125
 Pro Ala Leu Ile Glu Gln Gly Glu Gly Phe Ser Gln Val Leu Arg Met
 130 135 140
 Gln Pro Val Ile His Leu Gln Arg Ile His Gln Glu Val Phe Ser Ser
 145 150 155 160
 Cys His Arg Lys Pro Asp Ala Lys Pro Glu Asn Phe Ile Thr Gln Ile
 165 170 175
 Glu Thr Thr Pro Thr Glu Thr Ala Ser Arg Lys Thr Ser Asp Met Val
 180 185 190
 Leu Lys Arg Lys Gln Thr Lys Asp Cys Pro Gln Arg Lys Trp Tyr Pro
 195 200 205
 Leu Arg Pro Lys Lys Ile Asn Leu Asp Thr
 210 215

<210> 5145

<211> 1885

<212> DNA

<213> Homo sapiens

<400> 5145

ncctaggcgt cctgacaggt ggatttcgac aaggctcattg tgccctgccca aggcacagcg
 60
 tagatctgga aagagcagaa tgctttcctt ttcagatgtg gctgggtcatg gaaggggagc
 120
 ttgtccaagt tgggctgggt cttggtacac gtgggttcggc ccagctccac gtccaagaag
 180
 tagttcacc cagctacgat ctgcttgagg gcgcgcacca cctgcagcgc gcggctgtgg
 240
 tacatgtcgt tgctggcttt gttgtactcg ccgacggcct cgctcggta tcgcagcggg
 300
 tcctctctat ctagctccag cctctcgcct gcgcgccact ccccgctcc cgctcctag
 360
 ccgaccatgg ccggggccct gcgcgccccg ctgctcctgc tggccatcct ggccgtggcc
 420
 ctggcgtga gccccgcggc cggctccagt cccggcaagc cgccgcgcct ggtgggaggc
 480
 cccatggacg ccagcgtgga ggaggagggt gtgcggcgtg cactggactt tgccgtcggc
 540
 gagtacaaca aagccggcaa cgacatgtac cacagccgcg cgctgcaggt ggtgcgcgcc
 600
 cgcaagcagg tgacaatgtg ggcagctcat gaagatcgta gctgggggtga actacttctt
 660
 ggacgtggag ctgggcccga ccacgtgtac caagaccag cccaacttgg acaactgccc
 720

cttccatgac cagccacatc tgaaaaggaa agcattctgc tctttccaga tctacgctgt
 780
 gccttggcag ggcacaatga ccttgctgaa atccacctgt caggacgcct aggggtctgt
 840
 accgggctgg cctgtgccta tcacctctta tgcacacctc ccacccctg tattcccacc
 900
 cctggactgg tggccctgc cttggggaag gtctcccat gtgctgcac caggagacag
 960
 acagagaagg cagcaggcgg cctttgttgc tcagcaagg gctctgcct cctccttcc
 1020
 ttcttgcttc tcatagcccc ggtgtgcggt gcatacacc ccacctctg caataaata
 1080
 gtagcatcgg caaaaaaacc tggcatccgg acaggcatcc aaggccttaa aggagaccag
 1140
 ggggaacctg ggccctctgg aaaccccgcc aagggtgggt acccagggcc cagcggcccc
 1200
 ctggagccc gtggcatccc gggaattaaa ggcaccaagg gcagcccagg aaacatcaag
 1260
 gaccagccga ggccagcctt ctccgccatt cggcggaacc cccaatggg gggcaacgtg
 1320
 gtcattctcg acacggcat caccaaccag gaagaaccgt accagaacca ctccggccga
 1380
 ttcgtctgca ctgtaccgg ctactactac ttcacctcc aggtgctgtc ccagtgggaa
 1440
 atctgcctgt ccacgtctc ctctcaagg ggccagggtc gacgtccct gggcttctgt
 1500
 gacaccacca acaaggggct cttccagggt gtgtcagggg gcattggtgt tcagctgcag
 1560
 cagggtgacc aggtctgggt tgaaaaagac ccaaaaagg gtcacattta ccagggtct
 1620
 gagggcgaca gcgtcttcag cggtctctc atcttccat ctgctgagc cagggaagga
 1680
 cccctcccc caccacctc tctggcttcc atgtccgcc tgtaaatgg gggcgctatt
 1740
 gtttcagctg ctgaaggag ggggctggct ctgagagccc caggactggc tgccccgtga
 1800
 cacatgctct aagaagctg tttcttagac ctcttctgg aataaacatc tgtgtctgtg
 1860
 tctgctgaaa aaaaaaaaaa aaaaa
 1885

<210> 5146

<211> 312

<212> PRT

<213> Homo sapiens

<400> 5146

Pro	Ala	Thr	Ser	Glu	Lys	Glu	Ser	Ile	Leu	Leu	Phe	Pro	Asp	Leu	Arg
1				5					10					15	
Cys	Ala	Leu	Ala	Gly	His	Asn	Asp	Leu	Val	Glu	Ile	His	Leu	Ser	Gly
			20					25					30		
Arg	Leu	Gly	Val	Cys	Thr	Gly	Leu	Ala	Cys	Ala	Tyr	His	Leu	Leu	Cys
		35					40					45			
Thr	Pro	Pro	Thr	Pro	Cys	Ile	Pro	Thr	Pro	Gly	Leu	Val	Ala	Pro	Ala

50 55 60
 Leu Gly Lys Val Ser Pro Cys Ala Cys Thr Arg Arg Gln Thr Glu Lys
 65 70 75 80
 Ala Ala Gly Gly Leu Cys Cys Ser Ala Arg Gly Ser Ala Leu Pro Pro
 85 90 95
 Ser Phe Leu Leu Leu Ile Ala Pro Val Cys Gly Ala Tyr Thr Pro Thr
 100 105 110
 Ser Cys Asn Lys Ile Val Ala Ser Ala Lys Lys Pro Gly Ile Arg Thr
 115 120 125
 Gly Ile Gln Gly Leu Lys Gly Asp Gln Gly Glu Pro Gly Pro Ser Gly
 130 135 140
 Asn Pro Gly Lys Val Gly Tyr Pro Gly Pro Ser Gly Pro Leu Gly Ala
 145 150 155 160
 Arg Gly Ile Pro Gly Ile Lys Gly Thr Lys Gly Ser Pro Gly Asn Ile
 165 170 175
 Lys Asp Gln Pro Arg Pro Ala Phe Ser Ala Ile Arg Arg Asn Pro Pro
 180 185 190
 Met Gly Gly Asn Val Val Ile Phe Asp Thr Val Ile Thr Asn Gln Glu
 195 200 205
 Glu Pro Tyr Gln Asn His Ser Gly Arg Phe Val Cys Thr Val Pro Gly
 210 215 220
 Tyr Tyr Tyr Phe Thr Phe Gln Val Leu Ser Gln Trp Glu Ile Cys Leu
 225 230 235 240
 Ser Ile Val Ser Ser Ser Arg Gly Gln Val Arg Arg Ser Leu Gly Phe
 245 250 255
 Cys Asp Thr Thr Asn Lys Gly Leu Phe Gln Val Val Ser Gly Gly Met
 260 265 270
 Val Leu Gln Leu Gln Gln Gly Asp Gln Val Trp Val Glu Lys Asp Pro
 275 280 285
 Lys Lys Gly His Ile Tyr Gln Gly Ser Glu Ala Asp Ser Val Phe Ser
 290 295 300
 Gly Phe Leu Ile Phe Pro Ser Ala
 305 310

<210> 5147

<211> 2943

<212> DNA

<213> Homo sapiens

<400> 5147

nacgcgtcgc tgaaggagcg cttcgccttc ctcttcaact cggagctgct gagcgatgtg
 60
 cgcttcgtac tgggcaaggg tcgcggcgcc gccgccgctg ggggcccgca gcgcatcccc
 120
 gccaccgct tcgtgtggc ggccggcagc gccgtctttg acgccatgtt caacggcgcc
 180
 atggccacca cgtcggccga gatcgagctg ccggacgtgg agcccgagc cttcctggcg
 240
 ctgctgagat ttctatatc agatgaagtt caaattggc cagaaacagt tatgaccact
 300
 ctttatactg ccaagaaata cgcagtccca gccttggaag cacactgtgt agaatttctc
 360
 accaaacatc ttagggcaga taatgccttt atgttactta ctcaggctcg attatttgat
 420

gaacctcagc ttgctagtct ttgtctagat acaatagaca aaagcacaat ggatgcaata
480
agtgcagaag ggtttactga tattgatata gatacactct gtgcagtttt agagagagac
540
acactcagta ttcgagaaaag tcgacttttt ggagctgttg tacgctgggc agaagcagaa
600
tgtcagagac aacaattacc tgtgactttt gggaataaac aaaaagttct aggaaaagca
660
ctttccttaa tccgggtccc actgatgaca attgaggaat ttgcagcagg tcttgcctaa
720
tctggaattt tgtcagatcg tgaagtggta aacctctttc ttcattttac tgtaaccct
780
aaaccccgag ttgaatacat tgaccgacca agatgctgtc tcaggggaaa ggaatgctgc
840
atcaatagat tccagcaagt agaaagccgc tgggggttaca gtgggacgag tgatcgaatc
900
agattcacag ttaatagaag gatctctata gttggatttg gcttgtatgg atctattcat
960
ggccttacag attatcaagt gaatatacag atcattgaat atgagaaaaa gcaaaccctg
1020
ggacagaatg ataccggctt tagttgtgat gggacagcta acacattcag ggtcatgttc
1080
aaggaacca tagagatcct gcccaatgtg tgctacacag catgtgcaac actcaaagg
1140
ccagattccc actatggcac aaaaggattg aagaaagtag tgcagagac acctgtgca
1200
agcaagactg tttttttctt ttttagttcc cctggcaata ataatggcac ttcaatagaa
1260
gatggacaaa ttccagaaat catattttat acataattta gcattataat acatcttggc
1320
taaataatac catacaatct agtgtcaaaa acataaatgg ccacaaaaaa gtagtttgag
1380
tgttatgaat atttaaaatt gtaagataag aaacagtttc ttagagcaga tagaaaaatg
1440
cttatttaa tctttgcatg atttaaaaac agattttcca ttttcttaca actttaagag
1500
aaaagaactg ggtttaatgg tttaaaaaaa agcacagctt tttcaccttc atcttgata
1560
atttcataga ttggctgact tagggctctt caatagtttg ggaattgaaa gattcttgtt
1620
atatatagct agtttgggtt tgtttttgtt ttaactattt tgaaggtag gtgagatggg
1680
caaataggct taactatttt gaaggttgga tgaaaagaga tgggtcagta ttcctacaga
1740
attcttatta actcaaataa ctaaatttca gaaaattaag aagctgactt tatatttgg
1800
ggtttgaagt atcttgttgt tagcatttgt aataatgcta aaaaaggcct aataaaatgc
1860
ccaagaaaat attcagtgc tttatagaga aggatatttt gtagtagtat agtaatgtgt
1920
tatgtagtac agttttaaag ctataaatgg aatttttgtt aaattcacia aaatgtgata
1980
taaacaggat ctaagactgg attcctgtc actaaactgc accactatac ctgtctctct
2040

gtgtggggga cactgctgat gattcccaag attgagatga tgacggtgat gacgactggg
 2100
 tgaacagcca tcacttcaac attgtgataa tccttcacag cagaaaccga ataaaatact
 2160
 aacattttcta acaactgctc tgacattgta aagagatcca acagaatcac tcctgctgaa
 2220
 aaatacgctt tctgccacct acacatttct atttaggaag taaaatttgc ttcattggtca
 2280
 tgaccccatc agtcagtgtt acagctgtgt tggggatagg aagtatatct ggcagattga
 2340
 tatttataca cttttttata aagcagattt taaaatatag taacatccat ttttttcctt
 2400
 tgaaagtgat tctcttataa aaaatgaaag tggagttaa ggtatatcaa atcgttgtgg
 2460
 aaggtgatta aaaatcaaaa ttcttttaaa tatcaactta attttttcta agtaagatac
 2520
 aaaaaatttt catctaaagt aatatttcac tttatatgtt aaagaaggta ggtatatagg
 2580
 tggctgaggt ctcttgaaat tgctaaaggg aaatttttct atggtaatgc tcttacggat
 2640
 ataaacctca gttaaattga attatctatg ggatgtgtgg ttctgggtta ctaaaaatta
 2700
 accagtaaac actctgtagt aaccattaca gaaaatactt ctgccttaaa aaatatgata
 2760
 tgccagagat gagttagtgt ttcttgacgt tggagacctt ttaaatgcct catctgttgt
 2820
 actgaacaat tgaaactgca tgcagccata aaagggacaa gaaacagaac tgtttactaa
 2880
 ctttgggaca tcccctggag tttttaaaaa taaataaata tatatatata taaaaaaaaa
 2940
 aaa
 2943

<210> 5148

<211> 296

<212> PRT

<213> Homo sapiens

<400> 5148

Ala	Arg	Leu	Phe	Asp	Glu	Pro	Gln	Leu	Ala	Ser	Leu	Cys	Leu	Asp	Thr
1				5					10					15	
Ile	Asp	Lys	Ser	Thr	Met	Asp	Ala	Ile	Ser	Ala	Glu	Gly	Phe	Thr	Asp
			20					25					30		
Ile	Asp	Ile	Asp	Thr	Leu	Cys	Ala	Val	Leu	Glu	Arg	Asp	Thr	Leu	Ser
			35				40					45			
Ile	Arg	Glu	Ser	Arg	Leu	Phe	Gly	Ala	Val	Val	Arg	Trp	Ala	Glu	Ala
			50				55				60				
Glu	Cys	Gln	Arg	Gln	Gln	Leu	Pro	Val	Thr	Phe	Gly	Asn	Lys	Gln	Lys
					70					75				80	
Val	Leu	Gly	Lys	Ala	Leu	Ser	Leu	Ile	Arg	Phe	Pro	Leu	Met	Thr	Ile
			85					90						95	
Glu	Glu	Phe	Ala	Ala	Gly	Pro	Ala	Gln	Ser	Gly	Ile	Leu	Ser	Asp	Arg
			100					105						110	
Glu	Val	Val	Asn	Leu	Phe	Leu	His	Phe	Thr	Val	Asn	Pro	Lys	Pro	Arg

115	120	125
Val Glu Tyr Ile Asp Arg Pro Arg Cys Cys Leu Arg Gly Lys Glu Cys		
130	135	140
Cys Ile Asn Arg Phe Gln Gln Val Glu Ser Arg Trp Gly Tyr Ser Gly		
145	150	155
Thr Ser Asp Arg Ile Arg Phe Thr Val Asn Arg Arg Ile Ser Ile Val		
165	170	175
Gly Phe Gly Leu Tyr Gly Ser Ile His Gly Pro Thr Asp Tyr Gln Val		
180	185	190
Asn Ile Gln Ile Ile Glu Tyr Glu Lys Lys Gln Thr Leu Gly Gln Asn		
195	200	205
Asp Thr Gly Phe Ser Cys Asp Gly Thr Ala Asn Thr Phe Arg Val Met		
210	215	220
Phe Lys Glu Pro Ile Glu Ile Leu Pro Asn Val Cys Tyr Thr Ala Cys		
225	230	235
Ala Thr Leu Lys Gly Pro Asp Ser His Tyr Gly Thr Lys Gly Leu Lys		
245	250	255
Lys Val Val His Glu Thr Pro Ala Ala Ser Lys Thr Val Phe Phe Phe		
260	265	270
Phe Ser Ser Pro Gly Asn Asn Asn Gly Thr Ser Ile Glu Asp Gly Gln		
275	280	285
Ile Pro Glu Ile Ile Phe Tyr Thr		
290	295	

<210> 5149

<211> 533

<212> DNA

<213> Homo sapiens

<400> 5149

```

ntccggatgg cagttatggc tatggggatc aaagatgacc gtcttaacaa agaccgatgt
60
gtacgcctag ccctggttca tgatatggca gaatgcatcg ttggggacat agcaccagca
120
gataacatcc ccaaagaaga aaaacatagg cgagaagagg aagctatgaa gcagataacc
180
cagctcctac cagaggacct cagaaaggag ctctatgaac tttgggaaga gtacgagacc
240
caatctagtg cagaagccaa atttgtgaag cagctagacc aatgtgaaat gattcttcaa
300
gcatctgaat atgaagacct tgaacacaaa cctgggagac tgcaagactt ctatgattcc
360
acagcaggaa aattcaatca ccctgagata gtccagcttg tttctgaact tgaggcagaa
420
agaagcacta acatagctgc agctgccagt gagccacact cctgagacac tctctaaatt
480
gctgcactcc tgtaacaaac attattttcc atttcattgt attgtgtttt gca
533

```

<210> 5150

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5150
 Xaa Arg Met Ala Val Met Ala Met Gly Ile Lys Asp Asp Arg Leu Asn
 1 5 10 15
 Lys Asp Arg Cys Val Arg Leu Ala Leu Val His Asp Met Ala Glu Cys
 20 25 30
 Ile Val Gly Asp Ile Ala Pro Ala Asp Asn Ile Pro Lys Glu Glu Lys
 35 40 45
 His Arg Arg Glu Glu Glu Ala Met Lys Gln Ile Thr Gln Leu Leu Pro
 50 55 60
 Glu Asp Leu Arg Lys Glu Leu Tyr Glu Leu Trp Glu Glu Tyr Glu Thr
 65 70 75 80
 Gln Ser Ser Ala Glu Ala Lys Phe Val Lys Gln Leu Asp Gln Cys Glu
 85 90 95
 Met Ile Leu Gln Ala Ser Glu Tyr Glu Asp Leu Glu His Lys Pro Gly
 100 105 110
 Arg Leu Gln Asp Phe Tyr Asp Ser Thr Ala Gly Lys Phe Asn His Pro
 115 120 125
 Glu Ile Val Gln Leu Val Ser Glu Leu Glu Ala Glu Arg Ser Thr Asn
 130 135 140
 Ile Ala Ala Ala Ala Ser Glu Pro His Ser
 145 150

<210> 5151
 <211> 2273
 <212> DNA
 <213> Homo sapiens

<400> 5151
 nggtagtggg agatgtccgg ccggtctaag cgggagtctc gcggttccac tcgcgggaag
 60
 cgagagtctg agtcgcgggg cagctccggt cgcgtcaagc gggagcgcga tcgggagcgg
 120
 gagcctgagg cggcgagctc ccggggcagc cctgtgcgcg tgaagcggga gttcgagccg
 180
 gcgagcgcgc gcgaggcccc ggcttctgtt gtcccgtttg tgcgggtgaa gcgggagcgc
 240
 gaggtcgatg aggactcgga gcctgagcgg gaggtgcgag caaagaatgg ccgagtggat
 300
 tctgaggacc ggaggagccg cactgcctg tacctggaca ccattaacag gagtgtgctg
 360
 gactttgact ttgagaaact gtgttctatc tccctctcac acatcaatgc ttatgcctgt
 420
 ctggtgtgtg gcaagtactt tcaagctttt caccctccc tacaggccgg ggtttgaagt
 480
 ctcacgccta cattcacagt gtccagttaa gccaccatgt tttcctcaac ctccaccccc
 540
 tcaagtttta ctgccttcca gacaactatg agatcatcga ttcctcattg gaggatatca
 600
 cgtatgtgtt tgaagccac tttcacaag cagcaaattg caaacttga caagcaagcc
 660
 aaattgtccc gggcatatga tggtaacct tacctgccgg gtattgtggg actgaataac
 720
 ataaaggcca atgattatgc caacgctgtc cttcaggctc tatctaattg tcctcctctc
 780

cggaactact ttctggaaga agacaattat aagaacatca aacgtcctcc aggggatatc
840
atgttcttgt tgggtccagcg ttttgagagag ctgatgagaa agctctggaa ccctcgaaat
900
ttcaaggcac atgtgtctcc ccatgagatg cttcaggcag ttgtactttg cagtaagaag
960
acttttcaga tcaccaaaca aggagatggc gttgactttc tgtcttggtt tctgaatgct
1020
ctgcactcag ctctgggggg cacaagaag aaaaagaaga ctattgtgac tgatgttttc
1080
caggggtcca tgaggatctt cactaaaaag cttcccatc ctgatctgcc agcagaagaa
1140
aaagagcagt tgctccataa tgacgagtac caggagacaa tgggtggagtc cacttttatg
1200
tacctgacgc tggaccttcc tactgcccc ctctacaagg acgagaagga gcagctcatc
1260
attccccaag tgccactctt caacatcctg gctaagttca atggcatcac tgagaaggaa
1320
tataagactt acaaggagaa ctttctgaag cgcttcagc ttaccaagt gcctccatat
1380
ctaattcttt gtatcaagat attcactaag aacaacttct ttgttgagaa gaatccaact
1440
agttgtcaat ttccctatta caaatgtgga tctgagagaa tacttgtctg aagaagtaca
1500
agcagtacac aagaatacca cctatgacct cattgccaac atcgtgcatg acggcaagcc
1560
ctccgagggc tcctaccgga tccacgtgct tcatcatggg acaggcaa at ggtatgaatt
1620
acaagacctc caggtgactg acatccttcc ccagatgac acactgtcag aggcttacat
1680
tcagatttgg aagaggcgag ataatgatga aaccaaccag cagggggctt gaaggaggcg
1740
tctagggctt tgctcccaag ggctgtggct gatgatggta aataagaaca cagaagctgt
1800
agctgaacac aggtcggtg gtgggcttcc taggccagcc cagcttgat gggttctggc
1860
tacaccagag caccaagagc ccacttgctt gggatggccc cacactgtca ctcagtgtt
1920
ctttgatcat tttttctag attgatgctc ctttctcca tgcattgagc tcccatctag
1980
cttcagcagg gcagaacct tctccagatg tgtgtaactt atgtcttgag tatctgggag
2040
tagttgaaga acagataatt ccttccaaac atcaagcctt gggattcttg gagcaagcag
2100
aaagccagta acttcgctct gttagagggtg gaggattttc ctatgggtcc cccatttcc
2160
tgatttgtat ttttagatgg attaaatagt ctctgtttt taaaaaaaaa aaaaaaaaaa
2220
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
2273

<210> 5152

<211> 324

<212> PRT

<213> Homo sapiens

<400> 5152

```

Met Phe Ser Ser Thr Ser Thr Pro Ser Ser Phe Thr Ala Phe Gln Thr
1          5          10          15
Thr Met Arg Ser Ser Ile Pro His Trp Arg Ile Ser Arg Met Cys Leu
          20          25          30
Lys Pro Thr Phe Thr Lys Gln Gln Ile Ala Asn Leu Asp Lys Gln Ala
          35          40          45
Lys Leu Ser Arg Ala Tyr Asp Gly Thr Thr Tyr Leu Pro Gly Ile Val
          50          55          60
Gly Leu Asn Asn Ile Lys Ala Asn Asp Tyr Ala Asn Ala Val Leu Gln
65          70          75          80
Ala Leu Ser Asn Val Pro Pro Leu Arg Asn Tyr Phe Leu Glu Glu Asp
          85          90          95
Asn Tyr Lys Asn Ile Lys Arg Pro Pro Gly Asp Ile Met Phe Leu Leu
          100          105          110
Val Gln Arg Phe Gly Glu Leu Met Arg Lys Leu Trp Asn Pro Arg Asn
          115          120          125
Phe Lys Ala His Val Ser Pro His Glu Met Leu Gln Ala Val Val Leu
          130          135          140
Cys Ser Lys Lys Thr Phe Gln Ile Thr Lys Gln Gly Asp Gly Val Asp
145          150          155          160
Phe Leu Ser Trp Phe Leu Asn Ala Leu His Ser Ala Leu Gly Gly Thr
          165          170          175
Lys Lys Lys Lys Lys Thr Ile Val Thr Asp Val Phe Gln Gly Ser Met
          180          185          190
Arg Ile Phe Thr Lys Lys Leu Pro His Pro Asp Leu Pro Ala Glu Glu
          195          200          205
Lys Glu Gln Leu Leu His Asn Asp Glu Tyr Gln Glu Thr Met Val Glu
          210          215          220
Ser Thr Phe Met Tyr Leu Thr Leu Asp Leu Pro Thr Ala Pro Leu Tyr
225          230          235          240
Lys Asp Glu Lys Glu Gln Leu Ile Ile Pro Gln Val Pro Leu Phe Asn
          245          250          255
Ile Leu Ala Lys Phe Asn Gly Ile Thr Glu Lys Glu Tyr Lys Thr Tyr
          260          265          270
Lys Glu Asn Phe Leu Lys Arg Phe Gln Leu Thr Lys Leu Pro Pro Tyr
          275          280          285
Leu Ile Phe Cys Ile Lys Ile Phe Thr Lys Asn Asn Phe Phe Val Glu
          290          295          300
Lys Asn Pro Thr Ser Cys Gln Phe Pro Tyr Tyr Lys Cys Gly Ser Glu
305          310          315          320
Arg Ile Leu Val

```

<210> 5153

<211> 640

<212> DNA

<213> Homo sapiens

<400> 5153

```

nngctagcag gagaggagga ggtagatctc attgtacaca tccgtcttct ggagagaaca
60

```

acctctccta ccatcccttc cttctacacc ttctctgcct gtcataaggtag gctgcaggag
 120
 ggggtccacgt tgggagggac aggtgagctg gcctttggtag ctgacacact cctgactttg
 180
 ccctttctcc tgcagggggg gccattcccg cagaatgagg ctaatgccat ggatgtggtag
 240
 gtccagtttg ccatccaccg cctgggcttc cagccccagg acatcatcat ctacgccttg
 300
 tccatcgggc gcttcactgc cacgtgggca gccatgtcct acccagatgt tagtgccatg
 360
 atcctggatg cctcctttga tgacctggtag cccttggcct tgaaggatcat gccagacagc
 420
 tggagttagt gcagctccca ggcttgcctt tcttgggaag ggggtgggctg gaactgggaa
 480
 ctgttctgag atggctccct tttcttgggt ggggagtaag tcgccccaat gttggaagca
 540
 ggaggactcc tttgtctggg ggctcagtt ttctttctcc gtgaatagtg aggaccttta
 600
 tgttgggcaa gggctttgtc tctgccatcc cttcacgcgt
 640

<210> 5154

<211> 162

<212> PRT

<213> Homo sapiens

<400> 5154

Xaa	Leu	Ala	Gly	Glu	Glu	Val	Asp	Leu	Ile	Val	His	Ile	Arg	Leu
1			5					10					15	
Leu	Glu	Arg	Thr	Thr	Ser	Pro	Thr	Ile	Pro	Ser	Phe	Tyr	Thr	Phe
			20					25					30	
Ala	Cys	His	Arg	Trp	Leu	Gln	Glu	Gly	Ser	Thr	Leu	Gly	Gly	Thr
			35				40					45		
Glu	Leu	Ala	Phe	Gly	Ala	Asp	Thr	Leu	Leu	Thr	Leu	Pro	Phe	Leu
			50				55					60		
Gln	Gly	Val	Pro	Phe	Pro	Gln	Asn	Glu	Ala	Asn	Ala	Met	Asp	Val
						70				75				80
Val	Gln	Phe	Ala	Ile	His	Arg	Leu	Gly	Phe	Gln	Pro	Gln	Asp	Ile
						85				90				95
Ile	Tyr	Ala	Trp	Ser	Ile	Gly	Gly	Phe	Thr	Ala	Thr	Trp	Ala	Ala
			100					105					110	
Ser	Tyr	Pro	Asp	Val	Ser	Ala	Met	Ile	Leu	Asp	Ala	Ser	Phe	Asp
			115					120					125	
Leu	Val	Pro	Leu	Ala	Leu	Lys	Val	Met	Pro	Asp	Ser	Trp	Ser	Glu
			130				135					140		
Ser	Ser	Gln	Ala	Cys	Pro	Ser	Trp	Glu	Gly	Val	Gly	Trp	Asn	Trp
						150				155				160
Leu	Phe													

<210> 5155

<211> 1402

<212> DNA

<213> Homo sapiens

<400> 5155
ccaaagtcca gaagttacgc gtcacccttg ctctacagcc aaacatgcag gactctagta
60
acccgcgaaa tgatgggata gcgttgcaaa tccttaaaag agtcttaacg aaatcctggc
120
tgacattgac ttctccactg caaccatcga gttcattgtc tcctaaacct tgccatggag
180
gcctgtggca cctgagccag ccattatcat caccagcact tccatgagct acaagctgga
240
cccactgcag tcctcctgac aactgaaat cagagcctgc acacagagca gcagatgctt
300
caatgtaaag gtcatttcca ggtccttgac aggcgtgcat ctgggccaga tccatggcaa
360
taaccttcag gttgaggcta gagggcttca gatgggcagc ttcgaatgac aggagcaagg
420
aacaagaggc cggaaaggga gggtgacatt ttcagcatct ataagatcaa ctttagaaat
480
atctgggggt tgacaaattc ccatcaagct ctgtggatct tgtacaacta ctcaccaccg
540
gcttctcatc agcacatgat tgggtgcaggg ttctgaggat gattttgaga tgttccctga
600
tgtggtcttg tgaggagatt tcatgacgga tggcaggaaa cttcgtggag agatttctga
660
agacactcct gagctcccaa caccgggcaa ctctcttcca gaggatattg gggtagggg
720
tagaagagag gcaaagtcag gtttgtcttc ggatccccctt tcattctccc ttttccac
780
cgtaaaccac ctttggttta cagttagaca ccagttttcg gcagatgaaa tccctctgat
840
ttcaggcatt ttgtcaatta agctgctcag caacaatagg ataaacttat gaaaagaaag
900
gagtagcagt cccacagaca aagcatccag cccctgcact gagacagtat aggggaaggga
960
cttggtcctg gcagacagga cagataatca acatcctagt gggccttaca catgtgggca
1020
tattcttttc cataccttct tgtctgtttt aacaagctaa cccagtcac agtagcagag
1080
agagggcca tcctaactta gctgaccagg ctggattcct aatcataaaa ccaaaaaagg
1140
aagaacctaa ccatttctct ctttcagcta tgtgttccaa gattactgaa gcaggattct
1200
ggccttcctg ataagaacat gaccagatcc agctggtttg caacaagatg aacttcagt
1260
ctgagcttcc accaagtttt tctcactaca atctcattgt aatactaaaa tctccacca
1320
agatggaggt tatctgcat tttctgtact ctgctccgtt gtgctgctag agccacaagc
1380
ctattaaact ttgcctgaaa ta
1402

<210> 5156

<211> 118

<212> PRT

<213> Homo sapiens

<400> 5156

```

Met Asp Leu Ala Gln Met His Ala Cys Gln Gly Pro Gly Asn Asp Leu
 1           5           10           15
Tyr Ile Glu Ala Ser Ala Ala Leu Cys Ala Gly Ser Asp Phe Ser Val
          20           25           30
Ser Gly Gly Leu Gln Trp Val Gln Leu Val Ala His Gly Ser Ala Gly
          35           40           45
Asp Asp Asn Gly Trp Leu Arg Cys His Arg Pro Pro Trp Gln Gly Leu
          50           55           60
Gly Asp Asn Glu Leu Asp Gly Cys Ser Gly Glu Val Asn Val Ser Gln
65           70           75           80
Asp Phe Val Lys Thr Leu Leu Arg Ile Cys Asn Ala Ile Pro Ser Phe
          85           90           95
Arg Gly Leu Leu Glu Ser Cys Met Phe Gly Cys Arg Ala Arg Val Thr
          100          105          110
Arg Asn Phe Trp Thr Leu
          115

```

<210> 5157

<211> 1310

<212> DNA

<213> Homo sapiens

<400> 5157

```

tgcacagaaa ttacctttga cgtgcagtga cagttgattt cctcttgaac tgccggtgaa
60
aacagtctag tacacaggtg ctgtcagccc aggggtgggag caggaaatga ttgctgagcc
120
cggggcaggg gaattgcac tgcaggaaag agatgcagca tgctcctcac tcctgagtgc
180
ccacctgtcc tgcttctctg caggtgaaaa ctctggggga tgctgatcaa tagagcttgg
240
tcccaagctc tactgggccc ttggaggtag caaggccact ggggtgctat cctcttgctg
300
gggatagcaa cactgggtt gcaaccactg ggttgctatc cttttgctat cctcttgctc
360
atgaccagcc atatggtgag gctggggagt tcacatcctc aggcaggaac tagcagttgt
420
ttatccagca atgctcaag gatgttgcac tgctcccagg agctggctat taggtatgtc
480
ttgtgcggtc agtcagcatc acagacacat agatgctcac cagcctggct tagctgggac
540
ctaaatcttc tggtgaaaag cttttcacta agtgagggtc cttccctgca aatgctgaat
600
ctagcctaata tcgcaaccac acagaatttc atggctttca aaggcttgcc atgtgcccc
660
tctcattcta tactcacatc ccatggaggt gaggattttc acttcttttc tctagacttg
720
gaagctgaga ttcagagagg aagcatccct tgtgcaagat cacatagtca ggaggtgaca
780
cagggtctaag acttgaacca aggtcttaag aggatttctt cttttcagag tctcttcct
840

```

gtccatttct gtgactaagc tgtgcagagg ttgacagcag ggcaagttat attgatattc
 900
 atcctttata ggcttcctgc taaaaagctt ctgagattgt ggtcttccaa aaaaaatagg
 960
 agcttggttg aagtccccac attttcaagc actcagtgtt ctgcctctgc gaactgtgct
 1020
 aacagctcag tgctgtcctg ggagtcctct gactcagaac cctcgaagca tcctgcattg
 1080
 tctttaccca ccatcatctt cactaagaga aacatgccta cccatgaagg cgtgtttgat
 1140
 tactccaggc ttctggacac acatacccat ggggtgatttt tgctcctcag gccaatatt
 1200
 ctcagacagc ccagcagtgt gaacacacaa tgccaggcca gggaactggg gaccaccatc
 1260
 ttgctgatgg gaagggaaca acaggtggcc cagggacatg ctctgcata
 1310

<210> 5158

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5158

Met	Thr	Ser	His	Met	Val	Arg	Leu	Gly	Ser	Ser	His	Pro	Gln	Ala	Gly
1				5				10					15		
Thr	Ser	Ser	Cys	Leu	Ser	Ser	Asn	Ala	Ser	Arg	Met	Leu	His	Cys	Ser
			20				25					30			
Gln	Glu	Leu	Ala	Ile	Arg	Tyr	Val	Leu	Cys	Gly	Gln	Ser	Ala	Ser	Gln
		35				40				45					
Thr	His	Arg	Cys	Ser	Pro	Ala	Trp	Leu	Ser	Trp	Asp	Leu	Asn	Leu	Leu
	50				55					60					
Val	Lys	Ser	Phe	Ser	Leu	Ser	Glu	Val	Pro	Ser	Leu	Gln	Met	Leu	Asn
65				70					75				80		
Leu	Ala														

<210> 5159

<211> 3233

<212> DNA

<213> Homo sapiens

<400> 5159

nnggatccaa taaagtattg agaccaatgt gcaagaaata taattggaaa gcaatgtctt
 60
 ccatttcac agcttttagt gcatgcagcc atggcacaga gaaggagaa aagaatgtga
 120
 gcaaaagtga tcagggaaga tttcctgatg gaggggggag tccaaccggg gtcttcttgg
 180
 atagtagcat ttgagtagtg tttaaaaaat aaataaataa aaggagcacg tgagaagtaa
 240
 agttgcattt ctggacatga gagcagtgtt gtgaaactta gatgatgcat atagagaagg
 300
 cagcgagtgt gtttgaggat agtgagcgaa cagtttgtct gttcacggac atctgtccag
 360

agtggaagc acatagtggg taaccagaat gggcctcttc cctttccttt ttggttacc
420
cacaactcag tataggtact gactgccaaa tctccacatt tgtatatttc ttagcgtaat
480
gaaggcgatc tcttccaccg gctgtggcac atcatgaatg aaatcctgga cctgaggcgg
540
caggtgctgg tggggccacct caccacgac cggatgaagg acgtgaagcg ccacattact
600
gccccgcttg actggggcaa tgaacaactg ggactggacc tggcgcctag gaaagagtac
660
gcaatggtgg atccggaaga catcagcatt actgagctct accgattgtc catgctgac
720
atgtttttgt tgggggggtgt cattcagatg gaacatcgac atcggaagaa agacaccccg
780
gtgcaggcca gcagtcacca cctctttgtc cagatgaaga gcctcatgtg ttccaacctg
840
ggagaggagc tggaggtcat cttctcactc tttgacagta aagagaaccg gccaatcagt
900
gagagatttt tcttgaggct gaatagaaac gggcttccca aagccccga taaaccggaa
960
cgacattgct ccctctttgt ggatttgggc agcagtgagc taagaaagga catttatatc
1020
accgtgcaca ttatccgaat cggtcgaatg ggagcaggag aaaaaagaa tgcctgtagt
1080
gtccagtacc gacgacctt tggctgtgca gttcttagca tcgtgacct gctaacagga
1140
gagacaaagg atgacctcat tctgaaagta tacatgtgta acacagagag tgagtggtag
1200
caaatccatg agaacatcat caaaaagctg aatgcacgtt ataacttgac tggctccaat
1260
gcaggttttag cagtttctt acagctattg cacggagaca ttgaacaaat cagaagggaa
1320
tattcatcag tattttctca tggagtatcc ataacaagga agctgggatt ttcaaattt
1380
attatgcctg gtgaaatgag gaatgattta tatatcacta ttgaaagggg agaatttgag
1440
aaaggaggga agagcgtggc cagaaatgtg gaagttacga tgttcattgt agacagtagt
1500
ggccaaaccc tgaaggattt tatctccttc ggctctgggg agccaccagc cagttagtac
1560
cactcctttg tgctttacca taacaacagt cccaggtggt ctgaactgct gaaacttccc
1620
attcctgtgg ataaattccg gggcgcacac atccgcttcg agtttcggca ttgttcaca
1680
aaggagaaag gagagaagaa gttgtttggg ttttcttttg tccctctgat gcaagaagat
1740
ggtaggactc ttccagatgg cactcatgag ctcatcgtgc ataagtgtga agaaaacaca
1800
aatcttcagg atactaccg ctacctcaa cttccctttt ccaagggcat tttccttggg
1860
aataataatc aagccatgaa ggccacaaag gagtcctttt gtattacatc ttttctctgt
1920
tcacaaaaac tcacacaaaa tggatgatg cttgatcttt tgaaatggag aaccaccca
1980

gacaagatca ctggctgtct ctctaaatta aaagaaattg atggctcaga gatagtaaag
 2040
 tttctgcagg atacactgga taccttattt ggaatttttag atgaaaattc ccaaaaatat
 2100
 ggggtctaaag tgtttgattc tttggttcac ataataaatt tgctgcaaga tagcaaattt
 2160
 catcatttta aacctgtaat ggacacttac attgagagtc attttgctgg ggcacttgca
 2220
 tacagagatc tcatcaaagt gctcaaattg tacgtggacc ggatcacaga agcagagcgg
 2280
 caagagcata tccaggaggt gctgaaggca caagaatata tttttaagta tatagttcaa
 2340
 tctcgaaggc tgttttccct tgccactggg gggcaaaacg aagaggagtt ccgctgctgc
 2400
 attcaggagc ttctcatgtc agtccgtttc tttctttcgc aagagagcaa agggctctgga
 2460
 gcattatctc agtcacaggc tgtgtttctg agctctttcc ctgccgtgta ctcagaactg
 2520
 ttgaagctct ttgatgtccg ggaagtagcc aacttgggtcc aggacaccct gggcagtctg
 2580
 ccgaccatcc tgcattgtgga tgattccctg caggccatca aactgcagtg cattggcaaa
 2640
 accgtggaaa gccagcttta taccaaccca gattcccgat acattcttct gcctgtcgtg
 2700
 ttacatcacc tccacattca cttgcaagaa cagaaggacc tgatcatgtg tgcacgtatc
 2760
 cttagcaacg tattttgtct tatcaagaaa aatagctcag aaaaatctgt gctggaggaa
 2820
 atagatgtga tagtggccag cttgctggat attctgctga ggaccatatt ggagatcacc
 2880
 agccgacctc agccatccag ctcagcaatg cggttccagt tccaggatgt cactggggag
 2940
 tttgttgctt gtctcctgtc cctattacga caaatgacag atagacatta tcaacagctt
 3000
 cttgatagtt ttaatacaaa ggaagaacta agggtaagtg acattttaaa atgttttctt
 3060
 taacatatct tttgggttta tcttggtttt attcatcact gttgagataa atcctagaca
 3120
 attgctttac ctgtttccat taagttctaa gctgtttttc tcagcctcat ccacagatct
 3180
 gctcatctat attggctttt aaagatttct attactcaag caaagctatt aac
 3233

<210> 5160

<211> 849

<212> PRT

<213> Homo sapiens

<400> 5160

Met	Asn	Glu	Ile	Leu	Asp	Leu	Arg	Arg	Gln	Val	Leu	Val	Gly	His	Leu
1				5					10					15	
Thr	His	Asp	Arg	Met	Lys	Asp	Val	Lys	Arg	His	Ile	Thr	Ala	Arg	Leu
				20				25					30		
Asp	Trp	Gly	Asn	Glu	Gln	Leu	Gly	Leu	Asp	Leu	Val	Pro	Arg	Lys	Glu

	35					40					45				
Tyr	Ala	Met	Val	Asp	Pro	Glu	Asp	Ile	Ser	Ile	Thr	Glu	Leu	Tyr	Arg
	50					55					60				
Leu	Ser	Met	Leu	Ile	Met	Phe	Leu	Leu	Gly	Gly	Val	Ile	Gln	Met	Glu
65					70					75					80
His	Arg	His	Arg	Lys	Lys	Asp	Thr	Pro	Val	Gln	Ala	Ser	Ser	His	His
				85					90					95	
Leu	Phe	Val	Gln	Met	Lys	Ser	Leu	Met	Cys	Ser	Asn	Leu	Gly	Glu	Glu
			100					105					110		
Leu	Glu	Val	Ile	Phe	Ser	Leu	Phe	Asp	Ser	Lys	Glu	Asn	Arg	Pro	Ile
		115					120					125			
Ser	Glu	Arg	Phe	Phe	Leu	Arg	Leu	Asn	Arg	Asn	Gly	Leu	Pro	Lys	Ala
	130					135					140				
Pro	Asp	Lys	Pro	Glu	Arg	His	Cys	Ser	Leu	Phe	Val	Asp	Leu	Gly	Ser
145					150					155					160
Ser	Glu	Leu	Arg	Lys	Asp	Ile	Tyr	Ile	Thr	Val	His	Ile	Ile	Arg	Ile
				165					170					175	
Gly	Arg	Met	Gly	Ala	Gly	Glu	Lys	Lys	Asn	Ala	Cys	Ser	Val	Gln	Tyr
			180					185					190		
Arg	Arg	Pro	Phe	Gly	Cys	Ala	Val	Leu	Ser	Ile	Ala	Asp	Leu	Leu	Thr
		195					200					205			
Gly	Glu	Thr	Lys	Asp	Asp	Leu	Ile	Leu	Lys	Val	Tyr	Met	Cys	Asn	Thr
	210					215					220				
Glu	Ser	Glu	Trp	Tyr	Gln	Ile	His	Glu	Asn	Ile	Ile	Lys	Lys	Leu	Asn
225					230					235					240
Ala	Arg	Tyr	Asn	Leu	Thr	Gly	Ser	Asn	Ala	Gly	Leu	Ala	Val	Ser	Leu
			245					250					255		
Gln	Leu	Leu	His	Gly	Asp	Ile	Glu	Gln	Ile	Arg	Arg	Glu	Tyr	Ser	Ser
			260					265					270		
Val	Phe	Ser	His	Gly	Val	Ser	Ile	Thr	Arg	Lys	Leu	Gly	Phe	Ser	Asn
		275					280					285			
Ile	Ile	Met	Pro	Gly	Glu	Met	Arg	Asn	Asp	Leu	Tyr	Ile	Thr	Ile	Glu
	290					295					300				
Arg	Gly	Glu	Phe	Glu	Lys	Gly	Gly	Lys	Ser	Val	Ala	Arg	Asn	Val	Glu
305					310					315					320
Val	Thr	Met	Phe	Ile	Val	Asp	Ser	Ser	Gly	Gln	Thr	Leu	Lys	Asp	Phe
			325						330					335	
Ile	Ser	Phe	Gly	Ser	Gly	Glu	Pro	Pro	Ala	Ser	Glu	Tyr	His	Ser	Phe
		340					345						350		
Val	Leu	Tyr	His	Asn	Asn	Ser	Pro	Arg	Trp	Ser	Glu	Leu	Leu	Lys	Leu
		355					360					365			
Pro	Ile	Pro	Val	Asp	Lys	Phe	Arg	Gly	Ala	His	Ile	Arg	Phe	Glu	Phe
	370					375					380				
Arg	His	Cys	Ser	Thr	Lys	Glu	Lys	Gly	Glu	Lys	Lys	Leu	Phe	Gly	Phe
385					390					395					400
Ser</															

```
<210> 5161
<211> 1645
<212> DNA
<213> Homo sapiens
```

<400> 5161

ntggggcccc cagatttgcg ccattgcact ccagccttgg gacttgacgc ttctgaaacc
60
aaagggagag caaaagcagc cgggagcgcg cggggccgacc tggttctcct cccttccac
120
ggctgcctta gtacagaatc ttataagtcc tcttccctca gaggctacag atgggtgtcc
180
gaggccaggg gagtttaaag ctcgatttca cccgcgcagc ctccaatccg ggtgttctga
240
gaatcagcca tgtcatccct gtacccatct ctagaggacc taaaagtgga ccaagccatt
300
caggcccagg tcagagcctc acccaagatg ccagccctgc cagtccaggc aacagccatt
360
tccccaccac cagttttgta cccaaacttg gcagaactgg aaaattatat gggctcttcc
420
ctctccagcc aagaagtcca ggagagcctg cttcagattc cagaggggtga cagtacagcg
480
gtctcgggcc ccgggcccgg ccagatggtg gcaccggtaa ccgggtacag cctgggctg
540
cggcgagctg agatcaagcc cgggggtgcgc gagatccacc tgtgcaagga cgagcgcggc
600
aagaccgggc tgaggctgcg gaaggtcgac caggggctct ttgtgcagtt ggtccaggcc
660
aacaccctg catcccttgt ggggctgcgc tttggggacc agctcctgca gattgacggg
720
cgtgactgtg ctgggtggag ctgcacaaa gcccatcagg tgggaagaa ggcacaggc
780
gataagattg tcgtggtggt tcgggacagg ccgttccagc ggactgtcac catgcacaag
840
gacagcatgg gccacgtcgg cttcgtgatc aagaagggga agattgtctc tctggtcaaa
900
gggagtcttg cggcctgcaa cgggctcctc accaaccact acgtgtgtga ggtggacggg
960
cagaatgtta tcgggctgaa ggacaaaaag atcatggaga ttctggccac ggctgggaac
1020
gttgtacccc tgaccatcat cccagtggtg atctacgagc acatggtcaa aaagttgcct
1080
ccagtctgc tccaccacac catggaccac tccatcccag atgcctgaag ccaactggag
1140
gcagggcagg cagggggggc tccccgccct cctgcagcaa agggcaacca ccctcggtg
1200
atgggttgca gccggcctgc tgcttaaggt gggggctgcc atgagggggg cgtgtccagg
1260
agggtgacca tgggatggct tatacacaca ggctccttg gagcctcaga ctccaagcta
1320
ggctgaggct caggcagggc ccacaggcag cagattctct tgtgctgatt taaatgctg
1380
acacggaggc aggctgttta aacgtgctt aaagtcgcaa ctggggccct ttcaagaaat
1440
tttgctctac caggaaaaca gttacacatt ttaagagaac agagctacgt tctttgtgag
1500
agctttttcc ttggcttgac ttgctctttg tcacagactg cataagttgt cagccttgac
1560

tatcttttga ataaagattt gatttttaaac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaa
 1645

<210> 5162
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 5162
 Met Val Ala Pro Val Thr Gly Tyr Ser Leu Gly Val Arg Arg Ala Glu
 1 5 10 15
 Ile Lys Pro Gly Val Arg Glu Ile His Leu Cys Lys Asp Glu Arg Gly
 20 25 30
 Lys Thr Gly Leu Arg Leu Arg Lys Val Asp Gln Gly Leu Phe Val Gln
 35 40 45
 Leu Val Gln Ala Asn Thr Pro Ala Ser Leu Val Gly Leu Arg Phe Gly
 50 55 60
 Asp Gln Leu Leu Gln Ile Asp Gly Arg Asp Cys Ala Gly Trp Ser Ser
 65 70 75 80
 His Lys Ala His Gln Val Val Lys Lys Ala Ser Gly Asp Lys Ile Val
 85 90 95
 Val Val Val Arg Asp Arg Pro Phe Gln Arg Thr Val Thr Met His Lys
 100 105 110
 Asp Ser Met Gly His Val Gly Phe Val Ile Lys Lys Gly Lys Ile Val
 115 120 125
 Ser Leu Val Lys Gly Ser Ser Ala Ala Cys Asn Gly Leu Leu Thr Asn
 130 135 140
 His Tyr Val Cys Glu Val Asp Gly Gln Asn Val Ile Gly Leu Lys Asp
 145 150 155 160
 Lys Lys Ile Met Glu Ile Leu Ala Thr Ala Gly Asn Val Val Thr Leu
 165 170 175
 Thr Ile Ile Pro Ser Val Ile Tyr Glu His Met Val Lys Lys Leu Pro
 180 185 190
 Pro Val Leu Leu His His Thr Met Asp His Ser Ile Pro Asp Ala
 195 200 205

<210> 5163
 <211> 1187
 <212> DNA
 <213> Homo sapiens

<400> 5163
 nngtagagac ggggctctcc gtgttgctca ggctggctgc tgcatttcga ttcctgtgct
 60
 tgttctggct gaaggcgccg gccgctcaag cgtgtttcgg cagatatttt tgagaacatt
 120
 tttttatttt taaatacatg tatagcatga gtgatggagc caaacacaag ttttgaagcc
 180
 aagctcttgg ttctgagaaa caggcccaac actgcacagt gtcattcgca gtcaacccaa
 240
 ccactgtctg agttcacgtg acgattttctc ctgccaggtc acgggaagtt gttattttaa
 300

gatggcagtt attacgaagg ggcgtttgtg gacggagaga tcacgggaga aggccgccgg
 360
 cactgggcct ggtcaggaga caccttctct ggacagtttg ttctgggaga gcctcaaggc
 420
 tacggcgta tggagtacaa agccggcgga tgttatgaag gggagggtctc ccacggcatg
 480
 cgggaaggac acgggtttct ggtggaccgg gatggacaag tgtaccaggg ctcccttccat
 540
 gacaacaaga ggcacggccc tgggcagatg ctctttcaga acggtgacaa gtacgacggc
 600
 gactgggtcc gggaccggcg tcaggacac ggggtgctgc gctgcgccga cggctccacc
 660
 tacaaggac agtggcacag cgacgtcttc agtggactgg gcagcatggc cactgtctca
 720
 ggggtcacct attatgggtt gtggatcaat ggccaccag cagaacaagc tacgaggatc
 780
 gtgatcttgg gtccggaggt gatggaagtg gcccaagggt ctcccttctc ggtgaacgtt
 840
 cagctgctgc aggaccacgg ggaaattgcc aagagtaagc atctccaggg ggagatgacc
 900
 taacgtttcc aaaagagaaa caggcagcag gttcttaagc agtgaagatg cggacgagat
 960
 gttgcatgtg gctcctgagg cacagcagtg acttcgtgcc cagagcctgg cagagaggtc
 1020
 gcaggtgtgc cagcttcctt gccagtcagg gcagccttgg gtgtgtgtgc aagcatgtgt
 1080
 gcacatattg tgtgatgtgc gtgctcctgt atgtgtgtgc atatgtgtgt atgccttgca
 1140
 caggtgtgca caggtctgaa tgtgtatacg tgtggggggg cagcgt
 1187

<210> 5164

<211> 213

<212> PRT

<213> Homo sapiens

<400> 5164

Arg	Phe	Leu	Leu	Pro	Gly	His	Gly	Lys	Leu	Leu	Phe	Lys	Asp	Gly	Ser
1				5				10					15		
Tyr	Tyr	Glu	Gly	Ala	Phe	Val	Asp	Gly	Glu	Ile	Thr	Gly	Glu	Gly	Arg
		20						25					30		
Arg	His	Trp	Ala	Trp	Ser	Gly	Asp	Thr	Phe	Ser	Gly	Gln	Phe	Val	Leu
		35					40					45			
Gly	Glu	Pro	Gln	Gly	Tyr	Gly	Val	Met	Glu	Tyr	Lys	Ala	Gly	Gly	Cys
	50					55					60				
Tyr	Glu	Gly	Glu	Val	Ser	His	Gly	Met	Arg	Glu	Gly	His	Gly	Phe	Leu
65					70					75				80	
Val	Asp	Arg	Asp	Gly	Gln	Val	Tyr	Gln	Gly	Ser	Phe	His	Asp	Asn	Lys
			85					90					95		
Arg	His	Gly	Pro	Gly	Gln	Met	Leu	Phe	Gln	Asn	Gly	Asp	Lys	Tyr	Asp
			100					105					110		
Gly	Asp	Trp	Val	Arg	Asp	Arg	Arg	Gln	Gly	His	Gly	Val	Leu	Arg	Cys
		115					120					125			
Ala	Asp	Gly	Ser	Thr	Tyr	Lys	Gly	Gln	Trp	His	Ser	Asp	Val	Phe	Ser

130	135	140
Gly Leu Gly Ser Met Ala His Cys Ser Gly Val Thr Tyr Tyr Gly Leu		
145	150	155
Trp Ile Asn Gly His Pro Ala Glu Gln Ala Thr Arg Ile Val Ile Leu		160
	165	170
Gly Pro Glu Val Met Glu Val Ala Gln Gly Ser Pro Phe Ser Val Asn		175
	180	185
Val Gln Leu Leu Gln Asp His Gly Glu Ile Ala Lys Ser Lys His Leu		190
	195	200
Gln Gly Glu Met Thr		205
210		

<210> 5165

<211> 2370

<212> DNA

<213> Homo sapiens

<400> 5165

```

cagtccagtg ctgctgtcgc tggaaccctg cagagggcgg tgggtgagcg gctggggccc
60
cgtggagcca ccatggaccc cgcaggggca gcagaccctc cagtgcctcc caatcctttg
120
actcacctga gcctgcagga cagatcagag atgcagctgc agagcgaagc cgacagggcg
180
agcctcccgg gcacttggac caggtcatcc ccagagcaca ccaccattct gaggggaggg
240
gtgctcaggt gcctgcagca acagtgtgaa cagactgtgc ggatcctgca tgccaagggt
300
gccagaaat catacgaaa tgagaagcgg ttcttctgcc ccccgccctg tgtctacctc
360
tcggggcctg gctggagggt gaagccaggg caggatcaag ctcaccaggc gggggaaacg
420
ggggccacgg tctgcggtta catgggactg gacagcgcgt ccggcagcgc cactgagacg
480
cagaagctga atttcgagca gcagccggac tccagggaat tcggctgcgc caagaccctg
540
tacatctcag atgcagacaa gaggaagcac ttctggctgg tgetgaggct ggtgctgcgc
600
gggggcccgg agctgggtac cttccacagc cgccttatca aggtcatctc gaagccctcg
660
cagaagaagc agtcgctgaa aaacaccgat ctgtgcatat cctccggctc aaaggtctcc
720
ctcttcaacc gcctgcgctc tcagacggtc tccacacgct acctctctgt ggaggatggg
780
gcctttgtgg ccagtgcacg acagtgggct gccttcacgc tccacctggc tgatgggac
840
tctgcccag gagacttccc accgcgagag ggctacgttc gctatggctc cctggtgcag
900
ctcgtctgca cggtcaccgg catcacacta cctcccatga tcatccgtaa agtagcaaaa
960
cagtgtgcgc tccttgatgt ggatgagccc atctcccagc tgcacaagtg tgcattccag
1020
tttccaggca gtccccagg aggggggtggc acctacttat gccttgccac agagaagggtg
1080

```

gtgcaatttc aggcctctcc ctgcccacag gaggcgaaca gggctctgct taacgacagc
 1140
 tcttgctgga ccatactcgg caccgagtcg gtggaatttt ccttcagcac cagcctggcg
 1200
 tgtaccctgg agccggtcac tccggtgcct ctcatcagca ccctagagct gagcggcggg
 1260
 ggcgacgtgg ccacgctgga gctccacgga gagaacttcc acgcggggct caaggtgtgg
 1320
 tttggggacg tggaggcaga aacctgtac aggtacgggg tgnngagccc gcggtccctg
 1380
 gtgtgcgtgg tgccggacgt ggcggccttc tgcagcgact ggcgctggct gcgcgtccc
 1440
 atcacaatcc ccatagcct ggtgcgcgcc gacgggctct tctaccctag tgccttctcc
 1500
 ttcacctaca ccccggaata cagcgtgcgg ccgggtcacc ccggcgctcc cgagcccgcc
 1560
 accgacgccg acgcgctcct ggagagcatc catcaggagt tcacgcgcac caacttccac
 1620
 ctcttcatcc agacttaggc gcgcccggta gcccggctg cccaccctgg agggctgcgc
 1680
 ccgcgccagg cgcggggacg tgtttctggg ttctaggccc tgcttccttg cccctttgct
 1740
 gcagaagggc agctgaaggc tcacctaga aaccgggcct ggtgggtctt acccggtca
 1800
 ctccctccct tgccttaca catacaggaa gacaagacct gagggtgct gtctttgtgt
 1860
 ccgtcgtgta tggtctccc tgtcttcatt tcttctcact ctgtctctaa acctctctct
 1920
 ctctcccttc cccctcagta cttagtctac agacctatgt gcgtgtccct atccttctgt
 1980
 ccttttctct cttcagctct ccctgcctct cacacacaat tttacatgcc ccgaggagcc
 2040
 aagtttggga catttaccct ccaggcatct atgtcccctc ttgaagagaa aacacacagc
 2100
 ttcacacatc caggcatagg gggcaagctc ttggggcctc aggaccctgg agcaccagg
 2160
 ccttctcagg atattagatc cacctggaga accgggtctc tctaagtctc acctggggaa
 2220
 ttcggtecca cctggggcac cagtccccc ctagagcaact gtgtcctgcc ctagagcaca
 2280
 aagacctgct cctcccgaga ctctctctga ctgcagccag gcatagtacc cttgcctgtg
 2340
 tttgtccct ggtccacaga tttggtggct
 2370

<210> 5166

<211> 521

<212> PRT

<213> Homo sapiens

<400> 5166

Met	Asp	Pro	Ala	Gly	Ala	Ala	Asp	Pro	Ser	Val	Pro	Pro	Asn	Pro	Leu
1					5				10				15		
Thr	His	Leu	Ser	Leu	Gln	Asp	Arg	Ser	Glu	Met	Gln	Leu	Gln	Ser	Glu

20 25 30
 Ala Asp Arg Arg Ser Leu Pro Gly Thr Trp Thr Arg Ser Ser Pro Glu
 35 40 45
 His Thr Thr Ile Leu Arg Gly Gly Val Arg Arg Cys Leu Gln Gln Gln
 50 55 60
 Cys Glu Gln Thr Val Arg Ile Leu His Ala Lys Val Ala Gln Lys Ser
 65 70 75 80
 Tyr Gly Asn Glu Lys Arg Phe Phe Cys Pro Pro Cys Val Tyr Leu
 85 90 95
 Ser Gly Pro Gly Trp Arg Val Lys Pro Gly Gln Asp Gln Ala His Gln
 100 105 110
 Ala Gly Glu Thr Gly Pro Thr Val Cys Gly Tyr Met Gly Leu Asp Ser
 115 120 125
 Ala Ser Gly Ser Ala Thr Glu Thr Gln Lys Leu Asn Phe Glu Gln Gln
 130 135 140
 Pro Asp Ser Arg Glu Phe Gly Cys Ala Lys Thr Leu Tyr Ile Ser Asp
 145 150 155 160
 Ala Asp Lys Arg Lys His Phe Arg Leu Val Leu Arg Leu Val Leu Arg
 165 170 175
 Gly Gly Arg Glu Leu Gly Thr Phe His Ser Arg Leu Ile Lys Val Ile
 180 185 190
 Ser Lys Pro Ser Gln Lys Lys Gln Ser Leu Lys Asn Thr Asp Leu Cys
 195 200 205
 Ile Ser Ser Gly Ser Lys Val Ser Leu Phe Asn Arg Leu Arg Ser Gln
 210 215 220
 Thr Val Ser Thr Arg Tyr Leu Ser Val Glu Asp Gly Ala Phe Val Ala
 225 230 235 240
 Ser Ala Arg Gln Trp Ala Ala Phe Thr Leu His Leu Ala Asp Gly His
 245 250 255
 Ser Ala Gln Gly Asp Phe Pro Pro Arg Glu Gly Tyr Val Arg Tyr Gly
 260 265 270
 Ser Leu Val Gln Leu Val Cys Thr Val Thr Gly Ile Thr Leu Pro Pro
 275 280 285
 Met Ile Arg Lys Val Ala Lys Gln Cys Ala Leu Leu Asp Val Asp
 290 295 300
 Glu Pro Ile Ser Gln Leu His Lys Cys Ala Phe Gln Phe Pro Gly Ser
 305 310 315 320
 Pro Pro Gly Gly Gly Gly Thr Tyr Leu Cys Leu Ala Thr Glu Lys Val
 325 330 335
 Val Gln Phe Gln Ala Ser Pro Cys Pro Lys Glu Ala Asn Arg Ala Leu
 340 345 350
 Leu Asn Asp Ser Ser Cys Trp Thr Ile Ile Gly Thr Glu Ser Val Glu
 355 360 365
 Phe Ser Phe Ser Thr Ser Leu Ala Cys Thr Leu Glu Pro Val Thr Pro
 370 375 380
 Val Pro Leu Ile Ser Thr Leu Glu Leu Ser Gly Gly Asp Val Ala
 385 390 395 400
 Thr Leu Glu Leu His Gly Glu Asn Phe His Ala Gly Leu Lys Val Trp
 405 410 415
 Phe Gly Asp Val Glu Ala Glu Thr Met Tyr Arg Tyr Gly Val Xaa Ser
 420 425 430
 Pro Arg Ser Leu Val Cys Val Val Pro Asp Val Ala Ala Phe Cys Ser
 435 440 445
 Asp Trp Arg Trp Leu Arg Ala Pro Ile Thr Ile Pro Met Ser Leu Val

450		455		460	
Arg Ala Asp Gly Leu Phe Tyr Pro Ser Ala Phe Ser Phe Thr Tyr Thr					
465		470		475	480
Pro Glu Tyr Ser Val Arg Pro Gly His Pro Gly Val Pro Glu Pro Ala					
	485		490		495
Thr Asp Ala Asp Ala Leu Leu Glu Ser Ile His Gln Glu Phe Thr Arg					
	500		505		510
Thr Asn Phe His Leu Phe Ile Gln Thr					
515		520			

<210> 5167

<211> 878

<212> DNA

<213> Homo sapiens

<400> 5167

```

gggccccgga ccaggcgctg gggacacagc agtgaaaata ctaacattgt ttctgcctc
60
acggagctca cagtgttaaca gggagacaaa tagacctgtc agtagataac atgaaaataa
120
ttggactgtg tgctgcagac acaatatccc aggtctatga gaatgtcaat acagacttca
180
cgtgggaaat ggtgaggcaa taaggatcgt ttcccttgat gaaatggagc ttgcagaaga
240
aggcagggtc agttgtgggg agctctgggt ggaggtggag ggagtgcatt ccaagctgag
300
ccaagctatg acacctgagt ttctgcctc tgtgctgcct ccctgttttc cattcccgtt
360
tctcagcttc acttgtgggc tgagagtccc tgcgtgggtt atttttctgc ctttctcagg
420
gccttgggtt ccccaaagt cacaatgggca cagtaacacc catgtcctag ggttgaagat
480
ggcatgatat gatgtatgta aaatgcttgg cacaagggtt ctaccgaag tctggaggag
540
ctgtccaggg ttctggagac gaaacggagc ccgctgggaa ctgtcctgag ccccggtgct
600
gaaacagatc gcggttctct tctcggacct cccgagaggc gctgtccgga tatttggtgc
660
tccaagcag tcagccctgc tggctctctgc tttccagacc gtcaaacttc gccatctctg
720
tccctttttg ggaaaatgtc catgcgcaa cctgcaaacc agcctcattc ccggcatccc
780
acgtccctca gaccaccct cctcccaagc agctgcggga ctccccctct gtgtgcctca
840
cctgcttcca gtcttggttg cagatgcagg tgtcccg
878

```

<210> 5168

<211> 199

<212> PRT

<213> Homo sapiens

<400> 5168

Met Pro Gly Met Arg Leu Val Cys Arg Leu Ala His Gly His Phe Pro

1 5 10 15
 Lys Lys Gly Gln Arg Trp Arg Ser Leu Thr Val Trp Lys Ala Glu Thr
 20 25 30
 Ser Arg Ala Asp Cys Leu Gly Ala Pro Asn Ile Arg Thr Ala Pro Leu
 35 40 45
 Gly Arg Ser Glu Lys Arg Thr Ala Ile Cys Phe Ser Thr Gly Ala Gln
 50 55 60
 Asp Ser Ser Gln Arg Ala Pro Phe Arg Leu Gln Asn Pro Gly Gln Leu
 65 70 75 80
 Leu Gln Thr Ser Val Arg Asn Leu Val Pro Ser Ile Leu His Thr Ser
 85 90 95
 Tyr His Ala Ile Phe Asn Pro Arg Thr Trp Val Leu Leu Cys Pro Cys
 100 105 110
 Asp Ile Trp Gly Thr Gln Gly Pro Glu Lys Gly Arg Lys Ile Thr His
 115 120 125
 Ala Gly Thr Leu Ser Pro Gln Val Lys Leu Arg Thr Gly Asn Gly Lys
 130 135 140
 Gln Gly Gly Ser Thr Glu Ala Gly Asn Ser Gly Val Ile Ala Trp Leu
 145 150 155 160
 Ser Leu Glu Cys Thr Pro Ser Thr Ser Thr Gln Ser Ser Pro Gln Leu
 165 170 175
 Thr Leu Pro Ser Ser Ala Ser Ser Ile Ser Ser Arg Glu Thr Ile Leu
 180 185 190
 Ile Ala Ser Pro Phe Pro Thr
 195

<210> 5169
 <211> 609
 <212> DNA
 <213> Homo sapiens

<400> 5169
 accggtggct ttgcactcta cccgctgctc aacgaggctg cgccgttggc gctggggggcc
 60
 ggtttgggtgc ctgaggagct gccaccatcc cgcggggggcc tgggtgaggc actgggtgcc
 120
 gtggagctta gcctcagcga gttcctgcta ctcttcacca ctgctggcat ctacgtggat
 180
 ggcgcaggcc gcaagtctcg tggccacgag ctggtgtggc cagcagcgcc catgggctgg
 240
 gggatatgagg cccctacct gacagtgttc agcgagaact ccatcgatgt gtttgacgtg
 300
 aggagggcag aatgggtgca gaccgtgccg ctcaagaagg tgcggcccct caatccagag
 360
 ggctccctgt tcctctacgg caccgagaag gtccgcctga cctacctcag gaaccagctg
 420
 gcagagaagg acgagttcga catcccgac ctcaccgaca acagccggcg ccagctgttc
 480
 ctcaccaaga gcaagcgccg cttctttttc cgcgtgtcgg aggagcagca gaagcagcag
 540
 cgcagggaga tgctgaagga cccttttgtg cgctccaagc tcctctcgcc gcctaccaac
 600
 ttcaaccac
 609

<210> 5170
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 5170
 Thr Gly Gly Phe Ala Leu Tyr Pro Leu Leu Asn Glu Ala Ala Pro Leu
 1 5 10 15
 Ala Leu Gly Ala Gly Leu Val Pro Glu Glu Leu Pro Pro Ser Arg Gly
 20 25 30
 Gly Leu Gly Glu Ala Leu Gly Ala Val Glu Leu Ser Leu Ser Glu Phe
 35 40 45
 Leu Leu Leu Phe Thr Thr Ala Gly Ile Tyr Val Asp Gly Ala Gly Arg
 50 55 60
 Lys Ser Arg Gly His Glu Leu Leu Trp Pro Ala Ala Pro Met Gly Trp
 65 70 75 80
 Gly Tyr Ala Ala Pro Tyr Leu Thr Val Phe Ser Glu Asn Ser Ile Asp
 85 90 95
 Val Phe Asp Val Arg Arg Ala Glu Trp Val Gln Thr Val Pro Leu Lys
 100 105 110
 Lys Val Arg Pro Leu Asn Pro Glu Gly Ser Leu Phe Leu Tyr Gly Thr
 115 120 125
 Glu Lys Val Arg Leu Thr Tyr Leu Arg Asn Gln Leu Ala Glu Lys Asp
 130 135 140
 Glu Phe Asp Ile Pro Asp Leu Thr Asp Asn Ser Arg Arg Gln Leu Phe
 145 150 155 160
 Leu Thr Lys Ser Lys Arg Arg Phe Phe Phe Arg Val Ser Glu Glu Gln
 165 170 175
 Gln Lys Gln Gln Arg Arg Glu Met Leu Lys Asp Pro Phe Val Arg Ser
 180 185 190
 Lys Leu Ile Ser Pro Pro Thr Asn Phe Asn His
 195 200

<210> 5171
 <211> 2060
 <212> DNA
 <213> Homo sapiens

<400> 5171
 gaacagaggg ggtggaaact gcatcacaga tggtttccaa ggtccagggt ggaatctgag
 60
 ctctagtgtc tgactttgag atgcattata tttttaacac ataaatgagg ggatccatat
 120
 cacattcttt cttgtggacc accaaattga aggctttctt gtaattcaca agcagcagct
 180
 ctccagcatc tctccgtagc ctgggtgaag tcccagaagc tgggtgtgcat cattttccaa
 240
 ggtggcagag ctgcttgctc tgcagatcat tcctttgaga gaggagtaca agtgaagaaa
 300
 caaggaggca cttcctgtag gagcactgat gtgccttgct cacactcccc tctgagcttt
 360
 actggtaaga gagctccgac tgaacatgct gagcagttga gcacttttcc atcagcaaca
 420

acagcgagga tggaaatgga aaggaaccga actaaaatgc atttcccttt gcagggcaga
480
gagctaagct cttaggaata gtgttataga aataagcacc ctaacttcaa ttcctgaaaa
540
tgttggttaa tggagagaat tttggagttt cacttaatat tttcccatcg gtcgccataa
600
ataagtcttc aggcgctcct agaagagtcc cagcccaagg ctcgattaag gaccacactg
660
caggtctgag gctcactgct ctgagtcctg aacaccagag ccctgcagag agtggtgata
720
acacatcatc tctgcaaaga ggaacctctc ccccgccgc cacttctc aggttctac
780
tgagcagcaa ggacagcctg ggtttcaaat gccacttccc ctgctttagg gatccagggtg
840
tcctgatagc gtgacctgc tgaggcaagg tatcaactcc gagagtgact gagtactga
900
gcgtggcaca tgaacaaacg tcatgacaaa gattctctga gtgaagttaa caccacgtat
960
tttacctttg caaaaaacaa actggcacc tgagttctaa ctacggacgg acgatatctt
1020
tgcctccaca ccagattcc tggaaatggc taacgtttcc tttctagggg aagggtcgag
1080
gaatactcaa gtgctagctt agcagctttg ttcagtccag atcagagctg ttaggtaaag
1140
gcctaaccac ctccctgcag tctcttatat ctcaagcttt aggaacccat ttctaaatgt
1200
acactagcgg agaatttata ttgtcagcct tgattacat aggacaggca gaaaggcgat
1260
aatttgtatc ttttaataata aaagaagctt ttaacttttc cagcctatta ttataactga
1320
gttatattca ctgtggctca aactaattgg cattgtggaa catttcttta ccttcaaagt
1380
tttctccacc aatcatttca gttctattgc agtcctggtg ccatatgtcc cctgcaaatt
1440
gtgaaagtaa ttagtgacaa aatagcagcc tgctcctttt caatggcgaa actgtcggca
1500
ttagcagttt tgggtaagct ggcggtacta taacacgtac tggaaacctg ttcctcatca
1560
ccacctacca gattctggaa atgcctgctt ctagaaaacg atggcgtttg tgggtggtctt
1620
cttttgaaag gaacagtaat ttgtgtggat attgttaaag tgtttaaaga atattttgac
1680
aattaagttt acattttaca attgctttat tttttattaa aatagttgta tataaatatt
1740
accctatttc actgttgttc aagtaaactt aaaccttgta gacaagtgag tcacctgata
1800
tgtatagaag ctgtgatata tagagtacat ttattgtgta aatgtttatg aatataattg
1860
ttcctgtgtt tttataagtt ggggatattt tggtgtttta cggcaacaaa atttattgca
1920
tttaaaggt ttttatgtaa tagaaatcac gcaaaatagt gaaggattta aaatatgtat
1980
atgatacatg taaatgtaca aactttagaa agaaataaat ccaacaaatt tcaaaaaaaa
2040

aaaaaaaaaa aaaaaaaaaa

2060

<210> 5172

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5172

```

Met Leu Val Asn Gly Glu Asn Phe Gly Val Ser Leu Asn Ile Phe Pro
 1           5           10           15
Ser Val Ala Ile Asn Lys Ser Ser Gly Ala Pro Arg Arg Val Pro Ala
      20           25           30
Gln Gly Ser Ile Lys Asp His Thr Ala Gly Leu Arg Leu Thr Ala Leu
      35           40           45
Ser Pro Glu His Gln Ser Pro Ala Glu Ser Gly Asp Asn Thr Ser Ser
      50           55           60
Leu Gln Arg Gly Thr Ser Pro Pro Ala Ala Thr Ser Leu Arg Leu Leu
65           70           75           80
Leu Ser Ser Lys Asp Ser Leu Gly Phe Lys Cys His Phe Pro Cys Phe
      85           90           95
Arg Asp Pro Gly Val Leu Ile Ala
      100

```

<210> 5173

<211> 557

<212> DNA

<213> Homo sapiens

<400> 5173

```

ctttgatgcc tttattgatt caacacatgc ttattatatg cttgctgtgt gccgggcccc
60
agaccaggcg ctggagacac agcagtga aaataacat tgtttctgcc ctcacggagc
120
tcacagtgtg acaggagac aaatagacct gtcagtagat aacatgaaa taattggact
180
atgtgctgca gacacaatat ccaggtcta tgagaatgtc aatacagact tcacgtggga
240
aatggtgagg caataaggat cgtttccctt gatgaaatgg agcttcgaga agaaggcagg
300
gtcagttgtg gggagctctg gttggaggtg gagggagtgc attccaagct ggaggagctg
360
tccagggttc tggagactaa acggagcccc ctgggaactg tctgagccc cgggtgctga
420
acagatcgcg gttctcttct cggacctccc gagaagcgct gtccggatat ttggtgctcc
480
caagcagtca gccctgctgg tctctgcttt ccagaccggc aaacttcgcc gtctctgtcc
540
ctttctggga aaatggc
557

```

<210> 5174

<211> 93

<212> PRT

<213> Homo sapiens

<400> 5174

```

Met Glu Leu Ala Glu Glu Gly Arg Val Ser Cys Gly Glu Leu Trp Leu
 1          5          10          15
Glu Val Glu Gly Val His Ser Lys Leu Glu Glu Leu Ser Arg Val Leu
          20          25          30
Glu Thr Lys Arg Ser Pro Leu Gly Thr Val Leu Ser Pro Gly Ala Glu
          35          40          45
Thr Asp Arg Gly Ser Leu Leu Gly Pro Pro Glu Lys Arg Cys Pro Asp
          50          55          60
Ile Trp Cys Ser Gln Ala Val Ser Pro Ala Gly Leu Cys Phe Pro Asp
65          70          75          80
Arg Gln Thr Ser Pro Ser Leu Ser Leu Ser Gly Lys Met
          85          90

```

<210> 5175

<211> 272

<212> DNA

<213> Homo sapiens

<400> 5175

```

ccatggcagc tccagagacc aggtggaggg gaaatcaccc cacgctcccg agcagagagc
60
ttcggagcca gccagcctca ctgtgcgtgg cccacaacag ctgtctccat gtgtcacgtg
120
agggctgccc aacaccaggt agggcagcaa cgcccacgcc ctgcgcgggc acagcctccc
180
agaggtcact gccatgccgc actgaccgga gagagggcag tggtagaggg tgcattgccac
240
cccaggcttg ttccgaaggc cennnnnncc nc
272

```

<210> 5176

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5176

```

Met Ala Ala Pro Glu Thr Arg Trp Arg Gly Asn His Pro Thr Leu Pro
 1          5          10          15
Ser Arg Glu Leu Arg Ser Gln Pro Ala Ser Leu Cys Val Ala His Asn
          20          25          30
Ser Cys Leu His Val Ser Arg Glu Gly Cys Pro Thr Pro Gly Arg Ala
          35          40          45
Ala Thr Pro Thr Pro Ser Pro Gly Thr Ala Ser Gln Arg Ser Leu Pro
          50          55          60
Cys Arg Thr Asp Arg Arg Glu Gly Ser Gly Glu Arg Cys Met Pro Pro
65          70          75          80
Gln Ala Cys Ser Glu Gly Pro Xaa Xaa Xaa
          85          90

```

<210> 5177

<211> 637

<212> DNA

<213> Homo sapiens

<400> 5177

```

ntcctagtga gtatcgagtt ggtcttatta tcgcgtgaac tgggagcctt tgtttctcgc
60
gtgtcgcagg aagtgcggtt tcgggtacag ccgctaccag agtccctttc tcgcgaggcg
120
gaagaacccc gatcgctgag gagcaagggg gcgctaggaa agggaactgg gttgcgacgg
180
tccggcgaga gagagctggg gtgctggggg gcggggaagt tggggagcag aggccgcttg
240
gtgtccgagt agggtaagac cgcaccgacc cagtccgtta ggaaagaagg gaaacgaggc
300
aattgtcggg cggatccccg gacggagggc taaggttggtg tggaaggcgc tgctccccgg
360
atggcgaccg cagatactcc ggccccggcc tccagtggcc tctcgccgaa ggaagaaggg
420
gagcttgaag atggggaaat cagtgcgac gataataaca gccagatacg gagtcggagc
480
agcagcagca gcagcggcgg cgggctgtta ccctatccgc gggaaggcc tcttactcgc
540
gcccggggcg gtggatctgg cggaggcggt ggctcttctc cgtcatcgtc ctcttctcag
600
cagcagctga ggaatttctc acgctcgcgg cagcgct
637

```

<210> 5178

<211> 92

<212> PRT

<213> Homo sapiens

<400> 5178

```

Met Ala Thr Ala Asp Thr Pro Ala Pro Ala Ser Ser Gly Leu Ser Pro
1           5           10           15
Lys Glu Glu Gly Glu Leu Glu Asp Gly Glu Ile Ser Asp Asp Asp Asn
20           25           30
Asn Ser Gln Ile Arg Ser Arg Ser Ser Ser Ser Ser Ser Gly Gly Gly
35           40           45
Leu Leu Pro Tyr Pro Arg Arg Arg Pro Pro His Ser Ala Arg Gly Gly
50           55           60
Gly Ser Gly Gly Gly Gly Gly Ser Ser Ser Ser Ser Ser Ser Ser Gln
65           70           75           80
Gln Gln Leu Arg Asn Phe Ser Arg Ser Arg His Ala
85           90

```

<210> 5179

<211> 1527

<212> DNA

<213> Homo sapiens

<400> 5179

```

ggaacacagg ccatgccgcc tcctctctct tgggattacc accagtgcac ctggaactat
60

```

gaagttgagc cggatgtaaa agcagtggat gcagggtttg atgggcatga cattccttat
120
gatgccatgt ggctggacat agagcacact gagggcaaga ggtacttcac ctgggacaaa
180
aacagattcc ctaaccccaa gaggatgcaa gagctgctca ggaacaaaaa gcgtaagctt
240
gtggtcacat gtgatcccca catcaagatt gaacctgact actcagtata tgtgaaggcc
300
aaagatcagg gcttctttgt gaagaatcag gaaggggaag actttgaagg ggtgtgttgg
360
ccaggtctct cctcttacct ggatttcacc aatcccaagg tcagagagtg gtattcaagt
420
ctttttgctt tccctgttta tcagggatct acggacatcc tcttcctttg gaatgacatg
480
aatgagcctt ctgtcttttag agggccagag caaaccatgc agaagaatgc cattcatcat
540
ggcaattggg agcacagaga gctccacaac atctacgggt tttatcatca aatggctact
600
gcagaaggac tgataaaacg atctaaaggg aaggagagac cctttgttct tacacgttct
660
ttctttgctg gatcacaaaa gtatggtgcc gtgtggacag gcgacaacac agcagaatgg
720
agcaacttga aaatttctat cccaatgtta ctactctca gcattactgg gatctctttt
780
tgcgagctg acataggcgg gttcattggg aatccagaga cagagctgct agtgcgttgg
840
taccaggctg gagcctacca gcccttcttc cgtggccatg ccaccatgaa caccaagcga
900
cgagagccct ggctcttttg ggaggaacac acccgactca tccgagaagc catcagagag
960
cgctatggcc tcctgccata ttggtattct ctgttctacc atgcacacgt ggcttcccaa
1020
cctgtcatga ggctctgtg ggtagagttc cctgatgaac taaagacttt tgatatggaa
1080
gatgaataca tgctggggag tgcattattg gttcatccag tcacagaacc aaaagccacc
1140
acagttgatg tgtttcttcc aggatcaa at gaggtctggt atgactataa gacatttgct
1200
cattgggaag gaggggtgtac tgtaaagatc ccagtagcct tggacactat tccagtgtt
1260
cagcgagggtg gaagtgtgat accaataaag acaactgtag gaaaatccac aggctggatg
1320
actgaatcct cctagggact ccgggttgct ctaagcacta agggttcttc agtgggtgag
1380
ttatatcttg atgatggcca ttcatccaa tacctccacc agaagcaatt tttgcacagg
1440
aagttttcat tctgttccag tgttctgac aatagttttg ctgaccagag gggtcattat
1500
cccagcaagt gtgtggtgga gaagatc
1527

<210> 5180

<211> 444

<212> PRT

<213> Homo sapiens

<400> 5180

Gly Thr Gln Ala Met Pro Pro Pro Leu Ser Trp Asp Tyr His Gln Cys
 1 5 10 15
 Thr Trp Asn Tyr Glu Val Glu Pro Asp Val Lys Ala Val Asp Ala Gly
 20 25 30
 Phe Asp Gly His Asp Ile Pro Tyr Asp Ala Met Trp Leu Asp Ile Glu
 35 40 45
 His Thr Glu Gly Lys Arg Tyr Phe Thr Trp Asp Lys Asn Arg Phe Pro
 50 55 60
 Asn Pro Lys Arg Met Gln Glu Leu Leu Arg Asn Lys Lys Arg Lys Leu
 65 70 75 80
 Val Val Ile Ser Asp Pro His Ile Lys Ile Glu Pro Asp Tyr Ser Val
 85 90 95
 Tyr Val Lys Ala Lys Asp Gln Gly Phe Phe Val Lys Asn Gln Glu Gly
 100 105 110
 Glu Asp Phe Glu Gly Val Cys Trp Pro Gly Leu Ser Ser Tyr Leu Asp
 115 120 125
 Phe Thr Asn Pro Lys Val Arg Glu Trp Tyr Ser Ser Leu Phe Ala Phe
 130 135 140
 Pro Val Tyr Gln Gly Ser Thr Asp Ile Leu Phe Leu Trp Asn Asp Met
 145 150 155 160
 Asn Glu Pro Ser Val Phe Arg Gly Pro Glu Gln Thr Met Gln Lys Asn
 165 170 175
 Ala Ile His His Gly Asn Trp Glu His Arg Glu Leu His Asn Ile Tyr
 180 185 190
 Gly Phe Tyr His Gln Met Ala Thr Ala Glu Gly Leu Ile Lys Arg Ser
 195 200 205
 Lys Gly Lys Glu Arg Pro Phe Val Leu Thr Arg Ser Phe Phe Ala Gly
 210 215 220
 Ser Gln Lys Tyr Gly Ala Val Trp Thr Gly Asp Asn Thr Ala Glu Trp
 225 230 235 240
 Ser Asn Leu Lys Ile Ser Ile Pro Met Leu Leu Thr Leu Ser Ile Thr
 245 250 255
 Gly Ile Ser Phe Cys Gly Ala Asp Ile Gly Gly Phe Ile Gly Asn Pro
 260 265 270
 Glu Thr Glu Leu Leu Val Arg Trp Tyr Gln Ala Gly Ala Tyr Gln Pro
 275 280 285
 Phe Phe Arg Gly His Ala Thr Met Asn Thr Lys Arg Arg Glu Pro Trp
 290 295 300
 Leu Phe Gly Glu Glu His Thr Arg Leu Ile Arg Glu Ala Ile Arg Glu
 305 310 315 320
 Arg Tyr Gly Leu Leu Pro Tyr Trp Tyr Ser Leu Phe Tyr His Ala His
 325 330 335
 Val Ala Ser Gln Pro Val Met Arg Pro Leu Trp Val Glu Phe Pro Asp
 340 345 350
 Glu Leu Lys Thr Phe Asp Met Glu Asp Glu Tyr Met Leu Gly Ser Ala
 355 360 365
 Leu Leu Val His Pro Val Thr Glu Pro Lys Ala Thr Thr Val Asp Val
 370 375 380
 Phe Leu Pro Gly Ser Asn Glu Val Trp Tyr Asp Tyr Lys Thr Phe Ala
 385 390 395 400
 His Trp Glu Gly Gly Cys Thr Val Lys Ile Pro Val Ala Leu Asp Thr

			405					410				415			
Ile	Pro	Val	Phe	Gln	Arg	Gly	Gly	Ser	Val	Ile	Pro	Ile	Lys	Thr	Thr
			420					425					430		
Val	Gly	Lys	Ser	Thr	Gly	Trp	Met	Thr	Glu	Ser	Ser				
			435				440								

<210> 5181

<211> 4961

<212> DNA

<213> Homo sapiens

<400> 5181

acgcgtgcag gtggcagagc acccaggcct tgagggtccag gaagcatcat tcccagagct
 60
 gccagagcag tggccctgga aaatatggaa gcagctgtca gccatggccc agggcctgag
 120
 cgtatgattc tcaggaaaag tgggcaggat atctgactgt cagggtgtgcc ggcagaaggt
 180
 tctggcctct tcctgggaaa agccctttta gagtttgtcc tctcacttct ggagaagatg
 240
 cagacacagg agatcctgag gatactgcga ctgcctgagc taggtgactt gggacagttt
 300
 ttccgcagcc tctcgccac caccctcgtg agtatgggtg ccctggctgc catccttgcc
 360
 tactggttca ctcaccggcc aaaggccttg caaccaccat gcaacctcct gatgcagtcg
 420
 gaagaagtag aggacagtgg cggggcacgg cgatctgtga ttgggtcttg ccctcaattg
 480
 cttaccatt actatgatga tgcccggacc atgtaccagg tgttccgccg tgggcttagc
 540
 atctcagga atgggccctg tcttggtttc aggaagccta agcagcctta ccagtggctg
 600
 tcctaccagg aggtggccga cagggtgaa tttctggggt ccggacttct ccagcacaat
 660
 tgtaaagcat gcactgatca gtttattggt gtttttgcac aaaatcgcc agagtggatc
 720
 attgtggagc tggcctgcta cacatattcc atggtgggtg tcccgtctta tgacaccctg
 780
 ggccctgggg ctatccgcta catcatcaat acagcggaca tcagcaccgt gattgtggac
 840
 aaacctcaga aggtgtgtgt tctgctagag catgtggaga ggaaggagac tccaggcctc
 900
 aagctgatca tcctcatgga cccattcgaa gaagccctga aagagagagg gcagaagtgc
 960
 ggggtgttca ttaagtccat gcaggccgtg gaggactgtg gccaaagaaa tcaccaggct
 1020
 cctgtgcccc cgcagcctga tgacctctcc attgtgtgtt tcacaagcgg cagcagagg
 1080
 aacccaaaag gtgcgatgct caccatggg aacgtggtgg ctgatttctc aggctttctg
 1140
 aaagtgcag agagtgcagt ggctccact tgtgcggatg tgcacatttc ctatttgcct
 1200
 ttagcacaca tgtttgagcg aatggtgcag tctgtcgtct attgccacgg agggcgtgtt
 1260

ggcttcttcc agggagatat cgccttctc tcagatgaca tgaaggctct atgccccacc
1320
atcttccctg tggteccacg actgctgaac cggatgtacg acaagatctt cagccaggca
1380
aacacaccat taaagcgctg gctcctggag tttgcagcaa agcgtaagca agccgaggtc
1440
cggagtggaa tcatcaggaa tgatagtatc tgggatgaac tcttctttaa taagattcag
1500
gccagtcttg gtgggtgtgt gcggatgatt gttactggag cagccccagc atcaccaaca
1560
gttctgggat ttctccgggc agctctaggg tgccagggtt atgaaggtta tggccaaact
1620
gagtgcacag ctggatgtac cttcaccact cctggcgact ggacctcagg gcacgtaggg
1680
gcgccacttc cctgcaatca tatcaagctc gttgatgttg aggaactgaa ctactgggcc
1740
tgcaaaggag agggagagat atgtgtgaga ggaccaaagt tgttcaaagg ctacttgaaa
1800
gatccagaca ggacgaagga ggccctggac agcgatggct ggcttcacac tggagacatc
1860
ggaaaatggc tgccggcagg aactcttaaa attattgacg ggaaaaagca tatatttaaa
1920
cttgctcagg gagaatatgt tgcacccgag aagattgaga acatctacat ccggagccaa
1980
cctgtggcgc aaatctatgt ccatggggac agcttaaagg cctttttggt aggcattggt
2040
gtgcctgacc ctgaagttat gccctcctgg gccagaaga gaggaattga aggaacatat
2100
gcagatctct gcacaaataa ggatctgaag aaagccattt tggaagatat ggtgaggtta
2160
ggaaaagaaa gtggactcca ttcttttgag caggttaaag ccattcacat ccattctgac
2220
atgttctcag ttcaaaatgg cttgctgaca ccaacactaa aagctaagag acctgagctg
2280
agagagtact tcaaaaaaca aatagaagag ctttactcaa tctccatgtg aagttcaagg
2340
aaagttcttc tcagtgtaat gaactgtcta gcaatattat agttattctt gaaagtaatg
2400
agtcaaaatg acacagctga aaatgaataa gcattctgatt ttatgactga gccttttcct
2460
gtcccaagag gtctttaaca atattttctc tatcatcaat gagtatattt tatttttatt
2520
ataaaaatga tattgtgggtg gactgctaaa aatatcacia atggcaatgt aaaaatcaag
2580
acattttctc aagaactgtg taccactaaa agtaatatat tgtcaatgtt cacagaacta
2640
ttaaacataa aggaaaaaca taagtgatat attctactta attatttggt aatcagtaac
2700
cagatgcagc aaatatctag gcaatgtgga ctacctcatt cagtaactga ttgtcaaaat
2760
cacaattaaa tcagacttca aaaattaaag ctagggtgat agaatcatgc taaaagaaaa
2820
catgataact catagtctac gtaacttcag agtctttaaa catgacaatc cacattgtca
2880

tatgtgaaaa ttttctctct gatttttact ttcattcatg aaaaatgaaa attcagaaat
2940
tctttttttc ctttttggtt tgagacgggg tctgctctgt cacctaggct ggagtgcagt
3000
ggcttaataca tggctcattg cagtctccat ctctgggct cgagtgatcc tctgtctca
3060
cctcccaggt agctgagact acagtacagg cgcattgccac cacacctggc taatagaaat
3120
ttttttttta gagattttgc tcaggctggt ctcaaactcc tgagctcaag ggatcctccc
3180
gccttggcct ccttaggtgc tgggattgca ggcattgagcc attgttccca gccaaattca
3240
gatattatta aaacacatgt catatttata tagtaactta caaagacctt tcaatacatt
3300
ttctcattta ttaagctcat taaagtattc aggaactacc tagaaaaaat ataattgtaa
3360
actattcaag gatagtgtgt gtatgttcat ggacttctta ttataatgaa ttctaaaaga
3420
catctgttga ctctacaatg aatggatcct tgaggaatac ttgggagaag aaactcagag
3480
ttatttctca ggataggcag caattaatgt acctacattc cttgctgggg tcttctagtc
3540
ttccattccc aatgtgcccc tgctatgcct ggaaacccta tatggttgta attctgaaca
3600
atttcacttt tttccagta agaatatcaa ggcagaaggt gggaaggagg ggacattatt
3660
tccagggaaa atagtttttc aacaatataa ctttgataaa cctctttaaa atgccccaaag
3720
aaaacttttt aagtccatag acaaagaaat actgcctaatt ggcataatta cattcctaaa
3780
atctttaagc gtgccgaagt ttaaccacta aaacctcctt tcttgcatTA tgtatttaga
3840
tgcacctgt attgggggtgt caacaatttc ttataattaa aggccagata ccatggacag
3900
caattaagtt ccaagctata gattgtgcct ctgaaaaagg catggacccc aggaacgtgt
3960
ttttcttctg tagagacaag actctaaaag catatcaaca atccatatgc aattcatgtg
4020
ttaatttaaa atgtatgtgc tcagtgtttg tagtctagaa gctcctttcc cttggaggaa
4080
tgccaagcag ttgcaaaaa taaatgctgt tagttaaaaa ccacataatc acatgggcct
4140
actgaataaa tatgcatcag tgattatata cttatatattc agtcttgtca aaagtgaatc
4200
actgtttcat ttgatgtatt taccagctct ttttatccag tttttcttgg gcatattctc
4260
tctgaagacc cactgttgca cttctaaatt tgacagttaa gaaatgagct agttctatac
4320
acactgattt ttaaaggcgt ttctgaataa actaatactt aaaatgtcca aagtcacatc
4380
tgtacagcat tagattttta tatttaatat atatttgact aattaaaagt gaaagttgtt
4440
acctgaactg gatattcata ctattttaag ggcaagttgc ttacatttca ataacaaca
4500

aaaaagaatc tgtttcccat tgtcctccta ctcaactaaa attcatagtt ggctttaagc
 4560
 ccaaaagaat tttgaacaat gtgacagaaa caagtaatgt aaaacttatt ttgttttatt
 4620
 tatactttat aatagttaga tataacagat tatggacaac ttaatatattc ttctttttgg
 4680
 ctggggcgagg tggctcatgc ctgtgggtccc ggcaactttgg gaggccgagg cgggcagatc
 4740
 acgagggtcag gagatcgaga ccatacctggc taacacagtg aaaccccgtc tctactaaaa
 4800
 gaatacaaaa aattagccgg gcgttggtggc gggcgccctgt agtcccagct actcggggagg
 4860
 ctgaggcagg ggaatggcat gaggcctggga ggcggagctt gcagtggagcc gagatcccg
 4920
 cactgtactc cagcctgggc aacagaacga gactccgtct c
 4961

<210> 5182

<211> 697

<212> PRT

<213> Homo sapiens

<400> 5182

Met	Gln	Thr	Gln	Glu	Ile	Leu	Arg	Ile	Leu	Arg	Leu	Pro	Glu	Leu	Gly
1				5					10					15	
Asp	Leu	Gly	Gln	Phe	Phe	Arg	Ser	Leu	Ser	Ala	Thr	Thr	Leu	Val	Ser
			20					25					30		
Met	Gly	Ala	Leu	Ala	Ala	Ile	Leu	Ala	Tyr	Trp	Phe	Thr	His	Arg	Pro
		35					40					45			
Lys	Ala	Leu	Gln	Pro	Pro	Cys	Asn	Leu	Leu	Met	Gln	Ser	Glu	Glu	Val
	50					55					60				
Glu	Asp	Ser	Gly	Gly	Ala	Arg	Arg	Ser	Val	Ile	Gly	Ser	Gly	Pro	Gln
65					70					75				80	
Leu	Leu	Thr	His	Tyr	Tyr	Asp	Asp	Ala	Arg	Thr	Met	Tyr	Gln	Val	Phe
			85					90					95		
Arg	Arg	Gly	Leu	Ser	Ile	Ser	Gly	Asn	Gly	Pro	Cys	Leu	Gly	Phe	Arg
			100					105					110		
Lys	Pro	Lys	Gln	Pro	Tyr	Gln	Trp	Leu	Ser	Tyr	Gln	Glu	Val	Ala	Asp
		115					120					125			
Arg	Ala	Glu	Phe	Leu	Gly	Ser	Gly	Leu	Leu	Gln	His	Asn	Cys	Lys	Ala
		130				135					140				
Cys	Thr	Asp	Gln	Phe	Ile	Gly	Val	Phe	Ala	Gln	Asn	Arg	Pro	Glu	Trp
145					150					155				160	
Ile	Ile	Val	Glu	Leu	Ala	Cys	Tyr	Thr	Tyr	Ser	Met	Val	Val	Val	Pro
			165					170					175		
Leu	Tyr	Asp	Thr	Leu	Gly	Pro	Gly	Ala	Ile	Arg	Tyr	Ile	Ile	Asn	Thr
		180					185					190			
Ala	Asp	Ile	Ser	Thr	Val	Ile	Val	Asp	Lys	Pro	Gln	Lys	Ala	Val	Leu
		195					200					205			
Leu	Leu	Glu	His	Val	Glu	Arg	Lys	Glu	Thr	Pro	Gly	Leu	Lys	Leu	Ile
	210					215					220				
Ile	Leu	Met	Asp	Pro	Phe	Glu	Glu	Ala	Leu	Lys	Glu	Arg	Gly	Gln	Lys
225					230					235				240	
Cys	Gly	Val	Val	Ile	Lys	Ser	Met	Gln	Ala	Val	Glu	Asp	Cys	Gly	Gln

245 250 255
 Glu Asn His Gln Ala Pro Val Pro Pro Gln Pro Asp Asp Leu Ser Ile
 260 265 270
 Val Cys Phe Thr Ser Gly Thr Thr Gly Asn Pro Lys Gly Ala Met Leu
 275 280 285
 Thr His Gly Asn Val Val Ala Asp Phe Ser Gly Phe Leu Lys Val Thr
 290 295 300
 Glu Ser Gln Trp Ala Pro Thr Cys Ala Asp Val His Ile Ser Tyr Leu
 305 310 315 320
 Pro Leu Ala His Met Phe Glu Arg Met Val Gln Ser Val Val Tyr Cys
 325 330 335
 His Gly Gly Arg Val Gly Phe Phe Gln Gly Asp Ile Arg Leu Leu Ser
 340 345 350
 Asp Asp Met Lys Ala Leu Cys Pro Thr Ile Phe Pro Val Val Pro Arg
 355 360 365
 Leu Leu Asn Arg Met Tyr Asp Lys Ile Phe Ser Gln Ala Asn Thr Pro
 370 375 380
 Leu Lys Arg Trp Leu Leu Glu Phe Ala Ala Lys Arg Lys Gln Ala Glu
 385 390 395 400
 Val Arg Ser Gly Ile Ile Arg Asn Asp Ser Ile Trp Asp Glu Leu Phe
 405 410 415
 Phe Asn Lys Ile Gln Ala Ser Leu Gly Gly Cys Val Arg Met Ile Val
 420 425 430
 Thr Gly Ala Ala Pro Ala Ser Pro Thr Val Leu Gly Phe Leu Arg Ala
 435 440 445
 Ala Leu Gly Cys Gln Val Tyr Glu Gly Tyr Gly Gln Thr Glu Cys Thr
 450 455 460
 Ala Gly Cys Thr Phe Thr Thr Pro Gly Asp Trp Thr Ser Gly His Val
 465 470 475 480
 Gly Ala Pro Leu Pro Cys Asn His Ile Lys Leu Val Asp Val Glu Glu
 485 490 495
 Leu Asn Tyr Trp Ala Cys Lys Gly Glu Gly Glu Ile Cys Val Arg Gly
 500 505 510
 Pro Asn Val Phe Lys Gly Tyr Leu Lys Asp Pro Asp Arg Thr Lys Glu
 515 520 525
 Ala Leu Asp Ser Asp Gly Trp Leu His Thr Gly Asp Ile Gly Lys Trp
 530 535 540
 Leu Pro Ala Gly Thr Leu Lys Ile Ile Asp Arg Lys Lys His Ile Phe
 545 550 555 560
 Lys Leu Ala Gln Gly Glu Tyr Val Ala Pro Glu Lys Ile Glu Asn Ile
 565 570 575
 Tyr Ile Arg Ser Gln Pro Val Ala Gln Ile Tyr Val His Gly Asp Ser
 580 585 590
 Leu Lys Ala Phe Leu Val Gly Ile Val Val Pro Asp Pro Glu Val Met
 595 600 605
 Pro Ser Trp Ala Gln Lys Arg Gly Ile Glu Gly Thr Tyr Ala Asp Leu
 610 615 620
 Cys Thr Asn Lys Asp Leu Lys Lys Ala Ile Leu Glu Asp Met Val Arg
 625 630 635 640
 Leu Gly Lys Glu Ser Gly Leu His Ser Phe Glu Gln Val Lys Ala Ile
 645 650 655
 His Ile His Ser Asp Met Phe Ser Val Gln Asn Gly Leu Leu Thr Pro
 660 665 670
 Thr Leu Lys Ala Lys Arg Pro Glu Leu Arg Glu Tyr Phe Lys Lys Gln

675
 Ile Glu Glu Leu Tyr Ser Ile Ser Met
 690

680

685

695

<210> 5183
 <211> 2466
 <212> DNA
 <213> Homo sapiens

<400> 5183
 nngtgcacgt gcccaatgga tgcggcggcg aagggccgct cctcgaagta ttccaacttg
 60
 tcccgccagt tggggcccag gtcgttggtg agagttttca tcattctgctt cagtggcatg
 120
 agcctgcgct ccgaggaccc ctcagggaag aaggccgtgc tgggttccag tcctttcctg
 180
 tccgaggcca atgcagagcg gatcgtgcgc acgctctgca aggtgcgtgg tgcggcactc
 240
 aagctggggc agatgctgag catccaggat gatgccttta tcaaccccca cctggctaag
 300
 atcttcgagc ggggtgcggca gagcgcggac ttcattgccac tgaagcagat gatgaaaact
 360
 ctcaacaacg acctggggcc caactggcgg gacaagtgg aatacttcga ggagcggccc
 420
 ttcgcccgg catccattgg gcaggtgcac ttggcccgaa tgaagggcgg ccgcgaggtg
 480
 gccatgaaga tccagtaccc tggcgtggcc cagagcatca acagtgatgt caacaacctc
 540
 atggccgtgt tgaacatgag caacatgctt ccagaaggcc tgttccccga gcacctgac
 600
 gacgtgctga ggcgggagct ggccctggag tgtgactacc agcgagaggc cgctgtgccc
 660
 cgcaagttca gggacctgct gaagggccac cccttcttct atgtgcctga gattgtggat
 720
 gagctctgca gcccacatgt gctgaccaca gagctggtgt ctggcttccc cctggaccag
 780
 gccgaagggc tcagccagga gattcggaac gagatctgct acaacatcct ggttctgtgc
 840
 ctgagggagc tgtttgagtt ccacttcatg caaacagacc ccaactggtc caacttcttc
 900
 tatgaccccc agcagcaciaa ggtggctctt ttggattttg gggcaacgcg ggaatatgac
 960
 agatccttca ccgacctcta cattcagatc atcagggtcg ctgccgacag ggacagggag
 1020
 actgtgcggg cgaaatccat agagatgaag ttcctcaccg gctacgaggt caaggctcatg
 1080
 gaagacgccc acttggtatgc catcctcatc ctgggggagg ccttcgcctc cgatgagcct
 1140
 tttgattttg gcaactcagag caccaccgag aagatccaca acctgattcc cgtcatgctg
 1200
 aggcaccgtc tcttcccccc acccgaggaa acctactccc tgcacaggaa gatggggggc
 1260
 tccttcttca tctgctccaa gctgaaggcc cgcttcccct gcaaggccat gttcgaggag
 1320

gcctacagca actactgcaa gaggcaggcc cagcagtagg gctgcggggcc acgcccaggc
 1380
 cggctccgcg ggaactctct ccctcagaca ggccaaaaac cagtagcgag gtcgtggtga
 1440
 tgctcttttt aactcctttg cccaataagg ggggtggctg cctggagccc cgtagccagc
 1500
 gctttccacg gtttctgttg ctaaattggt gttaggtgag aagtgaaga atgaagatga
 1560
 agccccactg ctcggtcagt ctgcctccgt gtgtcctctg aaataagcag atgaagatga
 1620
 aagggcaact ttgttttctt ctttttcttg atgtgaatgt taagcagaag ggagagagtc
 1680
 cttactccct tccaatctct gttcagtgc aaacccagaa acatgaacag atacgattgt
 1740
 gggattttta tcatctgtgt agtaggtgtg tgtatgtgtt tctagagtga gatttgtgtt
 1800
 ttctgccctt ttctctcca gccgatgggc tggagctggg agaggtgctg agctaacagt
 1860
 gccacaagt gtccttaag cctgcgaggc ccaggcctgt ggggctgggt ctcacctttg
 1920
 acagctgaat gttcctaaag aactgctgcc ccacagtga ggtgggagca gcggaacagg
 1980
 gaatgccaga cacaggctcg ctgctgctgg aaggcggggt gggacttctt tctctgtcc
 2040
 ggagaggcac aggtgtcacc agttccagcc aaaggctcct cacaggcgct gtgaattttt
 2100
 gtacaagtct tgtaattatc gaatcaaaa cttgtttcaa ttaataaaa atgctcatgg
 2160
 gaaggcgggc gcggaggcgg ctagaagggt accgcggatc ccagcttctt gcagtcagcc
 2220
 ctgaaggatg gctgccatat tgggagacac catcatggtg gctaaaggcc ttgtcaagct
 2280
 gaccctcg cgctccaggac ccctcaggga agaaggccgt gctgggttcc agtcctttcc
 2340
 tgtccgaggc caatgcagag cggatcgtgc gcacgctctg caagggtcgt ggtgcggcac
 2400
 tcaagctggg ccagatgctg agcatccagg atgatgcctt tatcaacccc cacctggcta
 2460
 agatct
 2466

<210> 5184

<211> 395

<212> PRT

<213> Homo sapiens

<400> 5184

Pro	Phe	Leu	Ser	Glu	Ala	Asn	Ala	Glu	Arg	Ile	Val	Arg	Thr	Leu	Cys
1				5				10						15	
Lys	Val	Arg	Gly	Ala	Ala	Leu	Lys	Leu	Gly	Gln	Met	Leu	Ser	Ile	Gln
				20				25						30	
Asp	Asp	Ala	Phe	Ile	Asn	Pro	His	Leu	Ala	Lys	Ile	Phe	Glu	Arg	Val
		35					40					45			
Arg	Gln	Ser	Ala	Asp	Phe	Met	Pro	Leu	Lys	Gln	Met	Met	Lys	Thr	Leu

[illegible]

```
<210> 5185
<211> 1657
<212> DNA
<213> Homo sapiens
```

```
<400> 5185
gtgcactcac agaatctgct gcttcccagg tcttttggat gtgaaatgaa accccaagga
60
ctgtctttaac aaggggcaaa aacacatgca accaaagcca gcagttatgc cgaagcatcc
120
..
```

cggattccca tgagaaactc tctggatcta gttcctctac gtcacatgag tgtgcaaaca
180
ggagactaca agagttttaa aatactggga ctgctggaga tttccctggc catatatagt
240
tcacttgttt cacagatctc actctgtcac ccaggctgga gtacagtggg gcgatctcaa
300
cttactgcaa cctccgcctc ccggttcaag cgattcgcct gcctctgcct tagctatgtc
360
cctttcagaa aaattctact tcaagagaag atttggtttc aggatgtctc ctggactgga
420
gggcatgtac ctagagtccc acgaactggc tgggtataca gaaatgtcca gaggccggag
480
agcgtttcag atcacatgta ccggatggca gttatggcta tggatgacaa agatgaccgt
540
cttaacaaag acncggaagc tatgaagcag ataaccagc tcctaccaga ggacctcaga
600
aaggagctct atgaactttg ggaagagtac gagaccaat ctagtgacaa agccaaattt
660
gtgaagcagc tagaccaatg tgaatgatt cttcaagcat ctgaatatga agacctgaa
720
cacaacctg ggagactgca agacttctat gattccacag caggaaaatt caatcacctt
780
gagatagtc agcttggttc tgaacttgag gcagaaagaa gcactaacat agctgcagct
840
gccagtgagc cacactcctg agacactctc taaattgctg cactcctgta acaaacatta
900
ttttccatt tcattgtatt gtgttttgcc attgttggtc tgttgatttc cctagatgtg
960
agtctgtttg ttttcaattg tctgaacttc agcaagaaat gtgatacaac ttgggacta
1020
aaagaagcca cagaacagga agcggtcag aaagtgccat ggatgaacac tggagggtggc
1080
agtgcctgtt tatgaactaa ataaataaat attaaacacc taaaatatta gaatatttat
1140
tggagattta aaatcatctt attctgactt aattaccgat atccccgaag gctagggtca
1200
ttgaataata gaaaatttca ttatgattgc ttttaagaac agattcttca gctgatttag
1260
tgataagaat ccagaaaaga aaatgtacta gtgatgtatt ctctcccag atgaaattgc
1320
tgccttattc agatttactc tcttgagcca gattttgaat ttcactgcag actgcttcag
1380
acttctaate ataggcttgt aaacctacta ataggctctg cccctcttcc caatactttt
1440
tgtcatttag agatataaac cggggcatat aaaaatgcaa cttgtattcc tttgtatatt
1500
tttccctgtc tgacttataa atcttgagac ctttattgta aaagcattta tcatcagggtg
1560
agaaatataa ataggaactg gggtcattga gcctcaggta gggaaatat caaccggatt
1620
tcttctctc ttttccctt tataggataa ataatec
1657

<210> 5186

<211> 243
 <212> PRT
 <213> Homo sapiens

<400> 5186
 Met Arg Asn Ser Leu Asp Leu Val Pro Leu Arg His Met Ser Val Gln
 1 5 10 15
 Thr Gly Asp Tyr Lys Ser Leu Lys Ile Leu Gly Leu Leu Glu Ile Ser
 20 25 30
 Leu Ala Ile Tyr Ser Ser Leu Val Ser Gln Ile Ser Leu Cys His Pro
 35 40 45
 Gly Trp Ser Thr Val Val Arg Ser Gln Leu Thr Ala Thr Ser Ala Ser
 50 55 60
 Arg Phe Lys Arg Phe Ala Cys Leu Cys Leu Ser Tyr Val Pro Phe Arg
 65 70 75 80
 Lys Ile Leu Leu Gln Glu Lys Ile Trp Phe Gln Asp Val Ser Trp Thr
 85 90 95
 Gly Gly His Val Pro Arg Val Pro Arg Thr Gly Trp Val Tyr Arg Asn
 100 105 110
 Val Gln Arg Pro Glu Ser Val Ser Asp His Met Tyr Arg Met Ala Val
 115 120 125
 Met Ala Met Val Ile Lys Asp Asp Arg Leu Asn Lys Asp Xaa Glu Ala
 130 135 140
 Met Lys Gln Ile Thr Gln Leu Leu Pro Glu Asp Leu Arg Lys Glu Leu
 145 150 155 160
 Tyr Glu Leu Trp Glu Glu Tyr Glu Thr Gln Ser Ser Ala Glu Ala Lys
 165 170 175
 Phe Val Lys Gln Leu Asp Gln Cys Glu Met Ile Leu Gln Ala Ser Glu
 180 185 190
 Tyr Glu Asp Leu Glu His Lys Pro Gly Arg Leu Gln Asp Phe Tyr Asp
 195 200 205
 Ser Thr Ala Gly Lys Phe Asn His Pro Glu Ile Val Gln Leu Val Ser
 210 215 220
 Glu Leu Glu Ala Glu Arg Ser Thr Asn Ile Ala Ala Ala Ala Ser Glu
 225 230 235 240
 Pro His Ser

<210> 5187
 <211> 1712
 <212> DNA
 <213> Homo sapiens

<400> 5187
 ntattgtctt gtcggctcct gtgtgtagga gggatttcgg cctgagagcg ggccgaggag
 60
 attggcgacg gtgtcgcccg tgttttcggt ggcggggtgcc tgggctggtg ggaacagccg
 120
 cccgaaggaa gcaccatgat ttcggccgcg cagttgttgg atgagttaat gggccgggac
 180
 cgaaacctag ccccgacga gaagcgcagc aacgtgcggt gggaccacga gagcgtttgt
 240
 aaatattatc tctgtggttt ttgtcctgcg gaattgttca caaatacacg ttctgatctt
 300

gggtccgtgtg aaaaaattca tgatgaaaat ctacgaaaac agtatgagaa gagctctcgt
360
ttcatgaaag ttggctatga gagagatttt ttgctgatact tacagagctt acttgcagaa
420
gtagaacgta ggatcagacg aggccatgct cgtttggcat tatctcaaaa ccagcagtct
480
tctggggccg ctggcccaac aggcaaaaat gaagaaaaaa ttcagggttct aacagacaaa
540
attgatgtac ttctgcaaca gattgaagaa ttagggctctg aaggaaaagt agaagaagcc
600
caggggatga tgaaattagt tgagcaatta aaagaagaga gagaactgct aagggtccaca
660
acgtcgacaa ttgaaagctt tgctgcacaa gaaaaacaaa tggaagtttg tgaagtatgt
720
ggagcctttt taatagtagg agatgcccg tcccggttag atgaccattt gatgggaaaa
780
caacacatgg gctatgccaa aattaaagct actgtagaag aattaaaga aaagttaagg
840
aaaagaaccg aagaacctga tcgtgatgag cgtctaaaaa aggagaagca agaaagagaa
900
gaaagagaaa aagaacggga gagagaaagg gaagaaagag aaaggaaaag acgaagggaa
960
gaggaagaaa gagaaaaaga aagggtcgtgacacagagaa gaagaaagag aagtcgttca
1020
cgaagtagac actcaagccg aacatcagac agaagatgca gcagggtctcg ggaccacaaa
1080
aggtcacgaa gtagagaaag aaggcggagc agaagtagag atcgacgaag aagcagaagc
1140
catgatcgat cagaaagaaa acacagatct cgaagtcggg atcgaagaag atcaaaaagc
1200
cgggatcgaa agtcatataa gcacaggagc aaaagtcggg acagagaaca agatagaaaa
1260
tccaaggaga aagaaaagag gggatctgat gataaaaaaa gtagtgtgaa gtccggtagt
1320
cgagaaaagc agagtgaaga cacaacact gaatcgaagg aaagtgtac taagaatgag
1380
gtcaatggga ccagtgaaga cattaaatct gaagtgcagc gtaagtatgc acagatgaag
1440
atggaactaa gccgagtaag aagacatata aaagcctctt ctgaaggaaa agacagtgtg
1500
gtcctgcaaa acatttttag gtacattgtt ttgtctcagc tattttgtag cagactcgtg
1560
ccccattag tgtgcctctt tggaaattat cggccacatt tgtaatatag tcgccattga
1620
aaagttaatt atcctttttt tagggatttt gatgtcgttt cttttttttt ttaatacaaa
1680
ggttgaactg tttttttttt ctttttttgg tt
1712

<210> 5188

<211> 489

<212> PRT

<213> Homo sapiens

<400> 5188

```

Met Ile Ser Ala Ala Gln Leu Leu Asp Glu Leu Met Gly Arg Asp Arg
 1           5           10           15
Asn Leu Ala Pro Asp Glu Lys Arg Ser Asn Val Arg Trp Asp His Glu
      20           25           30
Ser Val Cys Lys Tyr Tyr Leu Cys Gly Phe Cys Pro Ala Glu Leu Phe
      35           40           45
Thr Asn Thr Arg Ser Asp Leu Gly Pro Cys Glu Lys Ile His Asp Glu
      50           55           60
Asn Leu Arg Lys Gln Tyr Glu Lys Ser Ser Arg Phe Met Lys Val Gly
      65           70           75           80
Tyr Glu Arg Asp Phe Leu Arg Tyr Leu Gln Ser Leu Leu Ala Glu Val
      85           90           95
Glu Arg Arg Ile Arg Arg Gly His Ala Arg Leu Ala Leu Ser Gln Asn
      100          105          110
Gln Gln Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Glu Glu Lys
      115          120          125
Ile Gln Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu
      130          135          140
Glu Leu Gly Ser Glu Gly Lys Val Glu Glu Ala Gln Gly Met Met Lys
      145          150          155          160
Leu Val Glu Gln Leu Lys Glu Glu Arg Glu Leu Leu Arg Ser Thr Thr
      165          170          175
Ser Thr Ile Glu Ser Phe Ala Ala Gln Glu Lys Gln Met Glu Val Cys
      180          185          190
Glu Val Cys Gly Ala Phe Leu Ile Val Gly Asp Ala Gln Ser Arg Val
      195          200          205
Asp Asp His Leu Met Gly Lys Gln His Met Gly Tyr Ala Lys Ile Lys
      210          215          220
Ala Thr Val Glu Glu Leu Lys Glu Lys Leu Arg Lys Arg Thr Glu Glu
      225          230          235          240
Pro Asp Arg Asp Glu Arg Leu Lys Lys Glu Lys Gln Glu Arg Glu Glu
      245          250          255
Arg Glu Lys Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Lys Arg
      260          265          270
Arg Arg Glu Glu Glu Arg Glu Lys Glu Arg Ala Arg Asp Arg Glu
      275          280          285
Arg Arg Lys Arg Ser Arg Ser Arg Ser Arg His Ser Ser Arg Thr Ser
      290          295          300
Asp Arg Arg Cys Ser Arg Ser Arg Asp His Lys Arg Ser Arg Ser Arg
      305          310          315          320
Glu Arg Arg Arg Ser Arg Ser Arg Asp Arg Arg Arg Ser Arg Ser His
      325          330          335
Asp Arg Ser Glu Arg Lys His Arg Ser Arg Ser Arg Asp Arg Arg Arg
      340          345          350
Ser Lys Ser Arg Asp Arg Lys Ser Tyr Lys His Arg Ser Lys Ser Arg
      355          360          365
Asp Arg Glu Gln Asp Arg Lys Ser Lys Glu Lys Glu Lys Arg Gly Ser
      370          375          380
Asp Asp Lys Lys Ser Ser Val Lys Ser Gly Ser Arg Glu Lys Gln Ser
      385          390          395          400
Glu Asp Thr Asn Thr Glu Ser Lys Glu Ser Asp Thr Lys Asn Glu Val
      405          410          415
Asn Gly Thr Ser Glu Asp Ile Lys Ser Glu Val Gln Arg Lys Tyr Ala

```

420 425 430
 Gln Met Lys Met Glu Leu Ser Arg Val Arg Arg His Thr Lys Ala Ser
 435 440 445
 Ser Glu Gly Lys Asp Ser Val Val Leu Gln Asn Ile Leu Arg Tyr Ile
 450 455 460
 Val Leu Ser Gln Leu Phe Cys Ser Arg Leu Val Pro Pro Leu Val Cys
 465 470 475 480
 Leu Phe Gly Asn Tyr Arg Pro His Leu
 485

<210> 5189
 <211> 323
 <212> DNA
 <213> Homo sapiens

<400> 5189
 acgcgtgaag ggattacagg catgagccac tgcacctggc caggagaaat tgtttttata
 60
 acgtatgaca aatgcttgag taattcctgg cttgaaagtg ggctcacaat aaataactgg
 120
 aatccaaaaa taacaaaatg tttagcaatt caggtaatgt caagcagtat tcaaacacat
 180
 gaagttaatc attccttaat tcctgtttat ttatatattca tttttgcttt ctttttactc
 240
 catgtgttat tcctacagaa gtcacaagtt aaatgttttt ggggaacttt gggggggggg
 300
 gacaaacatc catgtgctgc taa
 323

<210> 5190
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5190
 Met Ser His Cys Thr Trp Pro Gly Glu Ile Val Phe Ile Thr Tyr Asp
 1 5 10 15
 Lys Cys Leu Ser Asn Ser Trp Leu Glu Ser Gly Leu Thr Ile Asn Asn
 20 25 30
 Trp Asn Pro Lys Ile Thr Lys Cys Leu Ala Ile Gln Val Met Ser Ser
 35 40 45
 Ser Ile Gln Thr His Glu Val Asn His Ser Leu Ile Pro Val Tyr Leu
 50 55 60
 Tyr Phe Ile Phe Ala Phe Phe Leu Leu His Val Leu Phe Leu Gln Lys
 65 70 75 80
 Ser Gln Val Lys Cys Phe Trp Gly Thr Leu Gly Gly Gly Asp Lys His
 85 90 95
 Pro Cys Ala Ala
 100

<210> 5191
 <211> 1632
 <212> DNA
 <213> Homo sapiens

<400> 5191
tcccgcattt tagaggtgac tggagaactc tcacgtaggc ggccgcccga atttcccgc
60
cggtcatcg gggagcccct tccaagccc cgcaaacacc tgcattgaaa gaggcaggct
120
tccttctgac agcagataac atgtcgctg cggtcgcagc aagaggcgca tgcgcttg
180
cgtgggaggc cggtgcgca ggactggaac gcggttcctc cttcttcccc gccccgccc
240
gcttcggcg gaagcggcct caacaaggga aactttattg ttcccgaggc gcagtcagg
300
atgtcggga attacgcggc ggggtgtcg ccgtacgcgg acaagggaac gtgcggcctc
360
cggagatct tcgaccccc ggaggagctg gagcggaagg tgtgggaact ggcgaggctg
420
gtctggcagt ctccagtggt ggtgtccac acgggtgccg gcatcagcac tgcctctggc
480
atccccgact tcagggtcc ccacggagtc tggaccatgg aggagcgagg tctggcccc
540
aagttcgaca ccactttga gagcgcgcg cccacgcaga cccacatggc gctggtgcag
600
ctggagcgcg tgggcctcct ccgttcctg gtcagccaga acgtggacgg gctccatgtg
660
cgctcaggct tccccaggga caaactggca gagctccacg ggaacatgtt tgtggaagaa
720
tgtgccagt gtaagacgca gtacgtccga gacacagtcg tgggcacat gggcctgaag
780
gccacgggccc ggctctgcac cgtggctaag gcaagggggc tgcgagcctg caggggaggc
840
tgcgaggccc ctgaggactc tcctcagctt cctcattgca ggggagagct gagggacacc
900
atcctagact gggaggactc cctgcccgc cgggacctgg cactcgccga tgaggccagc
960
aggaacgcg acctgtccat cacgctgggt acatcgctgc agatccggcc cagcgggaac
1020
ctgccgctgg ctaccaagcg ccggggaggc cgctggtca tcgtcaacct gcagcccacc
1080
aagcacgacc gccatgctga cctccgcac catggctacg ttgacgaggt catgaccgg
1140
ctcatgaagc acctggggct ggagatcccc gctgggacg gccccgtgt gctggagagg
1200
gcgctgccac ccctgccccg cccgcccacc cccaagctgg agcccaagga ggaatctccc
1260
accggatca acggtctat cccgcccgc cccaagcagg agccctgcgc ccagcacaac
1320
ggctcagagc ccgcccagccc caaacgggag cggcccacca gccctgcccc ccacagacc
1380
cccaaaagg ggctctggt gcggttcgg gaagaagcca cccccagag gtgacagctg
1440
agccctgcc acacccagc ctctgacttg ctgtgtgtc cagaggtgag gctgggcct
1500
ccctggtctc cagcttaaac aggagtgaac tcctctgtc cccaggcct ccctctggg
1560

ccccctacag cccaccctac ccctcctcca tgggcctgc aggaggggag acccaccttg
 1620
 aagtggggga tc
 1632

<210> 5192
 <211> 377
 <212> PRT
 <213> Homo sapiens

<400> 5192
 Met Ser Val Asn Tyr Ala Ala Gly Leu Ser Pro Tyr Ala Asp Lys Gly
 1 5 10 15
 Lys Cys Gly Leu Pro Glu Ile Phe Asp Pro Pro Glu Glu Leu Glu Arg
 20 25 30
 Lys Val Trp Glu Leu Ala Arg Leu Val Trp Gln Ser Ser Ser Val Val
 35 40 45
 Phe His Thr Gly Ala Gly Ile Ser Thr Ala Ser Gly Ile Pro Asp Phe
 50 55 60
 Arg Gly Pro His Gly Val Trp Thr Met Glu Glu Arg Gly Leu Ala Pro
 65 70 75 80
 Lys Phe Asp Thr Thr Phe Glu Ser Ala Arg Pro Thr Gln Thr His Met
 85 90 95
 Ala Leu Val Gln Leu Glu Arg Val Gly Leu Leu Arg Phe Leu Val Ser
 100 105 110
 Gln Asn Val Asp Gly Leu His Val Arg Ser Gly Phe Pro Arg Asp Lys
 115 120 125
 Leu Ala Glu Leu His Gly Asn Met Phe Val Glu Glu Cys Ala Lys Cys
 130 135 140
 Lys Thr Gln Tyr Val Arg Asp Thr Val Val Gly Thr Met Gly Leu Lys
 145 150 155 160
 Ala Thr Gly Arg Leu Cys Thr Val Ala Lys Ala Arg Gly Leu Arg Ala
 165 170 175
 Cys Arg Gly Gly Cys Glu Ala Pro Glu Asp Ser Pro Gln Leu Pro His
 180 185 190
 Cys Arg Gly Glu Leu Arg Asp Thr Ile Leu Asp Trp Glu Asp Ser Leu
 195 200 205
 Pro Asp Arg Asp Leu Ala Leu Ala Asp Glu Ala Ser Arg Asn Ala Asp
 210 215 220
 Leu Ser Ile Thr Leu Gly Thr Ser Leu Gln Ile Arg Pro Ser Gly Asn
 225 230 235 240
 Leu Pro Leu Ala Thr Lys Arg Arg Gly Gly Arg Leu Val Ile Val Asn
 245 250 255
 Leu Gln Pro Thr Lys His Asp Arg His Ala Asp Leu Arg Ile His Gly
 260 265 270
 Tyr Val Asp Glu Val Met Thr Arg Leu Met Lys His Leu Gly Leu Glu
 275 280 285
 Ile Pro Ala Trp Asp Gly Pro Arg Val Leu Glu Arg Ala Leu Pro Pro
 290 295 300
 Leu Pro Arg Pro Pro Thr Pro Lys Leu Glu Pro Lys Glu Glu Ser Pro
 305 310 315 320
 Thr Arg Ile Asn Gly Ser Ile Pro Ala Gly Pro Lys Gln Glu Pro Cys
 325 330 335
 Ala Gln His Asn Gly Ser Glu Pro Ala Ser Pro Lys Arg Glu Arg Pro

340 345 350
 Thr Ser Pro Ala Pro His Arg Pro Pro Lys Arg Gly Pro Leu Val Arg
 355 360 365
 Phe Arg Glu Glu Ala Thr Pro Gln Arg
 370 375

<210> 5193
 <211> 554
 <212> DNA
 <213> Homo sapiens

<400> 5193
 acgcgtccct tcccagaggtt ccaggcggac gtgtcccttc ccgaggttct aggcggacat
 60
 gtcttttgag agggcctcag gttaaccac tactgtgtct gaatctgtcc cttccccaag
 120
 cagcagctct gtgtcccggc atggccactg tggggcagag acacagcagg tccacatct
 180
 ctgtgccctg cagaccctgc agccctgggg atgctggtct gggacggacc cctagatct
 240
 acacagccga gaggtaggtc agcgttttaa gatgctgata ccgctggttc agtcctgga
 300
 gcagaattct cagggtggat ttccagcaac gcctcctggg agggtcagca ggggctgggg
 360
 tccgtggggg ggtctccggg aggtttgcct gtgtcaggcc tgtgctgctt ctggcggagg
 420
 cgcttgcca gcctcatcca gcctggtgtc tccggtgcca cgcgctaaca ccttcagtgc
 480
 acgctcggga acgcgcctgg aaggccctgc cctgccccgc cccaggctcc agccagatgc
 540
 tgccagcacc cggg
 554

<210> 5194
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 5194
 Met Leu Ile Pro Leu Val Gln Leu Leu Glu Gln Asn Ser Gln Gly Gly
 1 5 10 15
 Phe Pro Ala Thr Pro Pro Gly Arg Val Ser Arg Gly Trp Gly Pro Trp
 20 25 30
 Gly Gly Leu Arg Glu Val Cys Leu Cys Gln Ala Cys Ala Ala Ser Gly
 35 40 45
 Gly Gly Ala Cys Pro Ala Ser Ser Ser Leu Val Ser Pro Val Pro Arg
 50 55 60
 Ala Asn Thr Phe Ser Ala Arg Ser Gly Thr Arg Leu Glu Gly Pro Ala
 65 70 75 80
 Leu Pro Arg Pro Arg Leu Gln Pro Asp Ala Ala Ser Thr Arg
 85 90

<210> 5195
 <211> 964

<212> DNA

<213> Homo sapiens

<400> 5195
 gggcccaggc tcacagaggt gtgaaagagg caagcacacc gcaggggcct ctgagcccag
 60
 ccagcctcgc ttcaatgctg ggaggctgac gtcttccttt ttgtcttctg cccaggccag
 120
 ctgcggggcg tccagcggct gtgccacttc tacagcgccg tcatgcccag cgaggcccag
 180
 tgtgtcatct accatgagct ccagctctcc ctggcctgca aggtggccga caaggtgctg
 240
 gaggggcagc tcttgagac catcagccag ctctacctgt ccctgggcac cgagcgggcc
 300
 tacaaatccg cactggacta caccaaacga agtctgggga ttttcattga cctccagaag
 360
 aaagagaagg aggcgcagtc ctggctgcaa gcagggaaga tctattacat cttgcggcag
 420
 agcgagctgg tggacctcta catccagggt gcacagaacg tggccctgta cacaggcgac
 480
 cccaacctgg ggctggagct gtttgaggcg gctggagaca tcttcttcga cggggcctgg
 540
 gagcgggaga aagctgtgtc cttctaccgg gaccggggcc tgcccctggc agtgactacg
 600
 ggcaaccgca aggcggagct gcggctgtgc aacaagctgg tggcactgct ggccacgctg
 660
 gaggagcccc aggagggcct ggagtttgcc cacatggccc tagcactcag catcactctg
 720
 ggggaccggc tgaacgagcg cgtggcctac caccggctgg ccgccctgca acaccgactg
 780
 ggccatggcg agctggcaga gcacttctac ctcaaggccc tgcgctctg caactcgccg
 840
 ctggagtttg acgaggagac cctctactac gtgaagggtg acctgggtgct cggtgacatc
 900
 atcttctacg acctgaagga ccggtttgat gcagccgggt actaccagct ggcgctggcg
 960
 gccg
 964

<210> 5196

<211> 267

<212> PRT

<213> Homo sapiens

<400> 5196
 Met Pro Ser Glu Ala Gln Cys Val Ile Tyr His Glu Leu Gln Leu Ser
 1 5 10 15
 Leu Ala Cys Lys Val Ala Asp Lys Val Leu Glu Gly Gln Leu Leu Glu
 20 25 30
 Thr Ile Ser Gln Leu Tyr Leu Ser Leu Gly Thr Glu Arg Ala Tyr Lys
 35 40 45
 Ser Ala Leu Asp Tyr Thr Lys Arg Ser Leu Gly Ile Phe Ile Asp Leu
 50 55 60
 Gln Lys Lys Glu Lys Glu Ala His Ala Trp Leu Gln Ala Gly Lys Ile

65		70		75		80									
Tyr	Tyr	Ile	Leu	Arg	Gln	Ser	Glu	Leu	Val	Asp	Leu	Tyr	Ile	Gln	Val
				85					90					95	
Ala	Gln	Asn	Val	Ala	Leu	Tyr	Thr	Gly	Asp	Pro	Asn	Leu	Gly	Leu	Glu
			100					105					110		
Leu	Phe	Glu	Ala	Ala	Gly	Asp	Ile	Phe	Phe	Asp	Gly	Ala	Trp	Glu	Arg
		115					120					125			
Glu	Lys	Ala	Val	Ser	Phe	Tyr	Arg	Asp	Arg	Ala	Leu	Pro	Leu	Ala	Val
		130					135					140			
Thr	Thr	Gly	Asn	Arg	Lys	Ala	Glu	Leu	Arg	Leu	Cys	Asn	Lys	Leu	Val
145					150					155				160	
Ala	Leu	Leu	Ala	Thr	Leu	Glu	Glu	Pro	Gln	Glu	Gly	Leu	Glu	Phe	Ala
			165						170					175	
His	Met	Ala	Leu	Ala	Leu	Ser	Ile	Thr	Leu	Gly	Asp	Arg	Leu	Asn	Glu
			180						185				190		
Arg	Val	Ala	Tyr	His	Arg	Leu	Ala	Ala	Leu	Gln	His	Arg	Leu	Gly	His
		195					200					205			
Gly	Glu	Leu	Ala	Glu	His	Phe	Tyr	Leu	Lys	Ala	Leu	Ser	Leu	Cys	Asn
		210					215					220			
Ser	Pro	Leu	Glu	Phe	Asp	Glu	Glu	Thr	Leu	Tyr	Tyr	Val	Lys	Val	Tyr
225					230					235				240	
Leu	Val	Leu	Gly	Asp	Ile	Ile	Phe	Tyr	Asp	Leu	Lys	Asp	Pro	Phe	Asp
			245						250					255	
Ala	Ala	Gly	Tyr	Tyr	Gln	Leu	Ala	Leu	Ala	Ala					
			260						265						

<210> 5197

<211> 1045

<212> DNA

<213> Homo sapiens

<400> 5197

natgttggtc aggctgggtc caaactcctg acctcgtgat ccgcccacct cagcctcgca
 60
 aagtgctggg attacaggcg tgagccacca tggtggctcag tctgggtctca nactcctgtc
 120
 ctcatgatcc gccacctca gcctcgcaaa gtgctgggat tacaggcatg agccaccacg
 180
 tccggccacc actgactttt tcattctttc tcattcttcc tgggcccctcc tgctgttgta
 240
 ggcccccatg aagaagtgga ctattctgag aaactgaagt tcagtgatga tgaagaggag
 300
 gaagaagttg tgaaggacgg caggccaaag tggaacagtt gggaccctag gaggcagcgg
 360
 cagttgtcaa tgagctctgc agacagtgcg gacgctaagc ggactcgaga ggaagggag
 420
 gactgggctg aagcagtggg tgcggtccgt gtgggtccgaa aggcgcccaga ccctcagcca
 480
 ccgcccagga agcttcatgg ctgggcacca ggccctgact accagaagtc atcaatgggc
 540
 agcatgttcc ggcaacagtc catcgaggac aaggaggaca agccccacc aaggcagaag
 600
 ttcattcagt cagagatgtc cgaggcgggtg gagcgagccc gaaagcgccg ggaagaagag
 660

gagcgccgag cccgggagga gaggctggcc gcctgtgctg ccaaactcaa gcagctggac
 720
 cagaagtgtg agcaggcacg aaaggcaggt gaggcccga agcaggcaga gaaggaagtg
 780
 ccctgggtctc caagtgtga gaaggcatct ccccaggaaa acggccctgc tgtccacaaa
 840
 ggctccccag aattccctgc ccaagagacc cccaccacat tcccagaaga ggcaccaca
 900
 gtgtccccag cagtggcaca gagcaacagc agtgaggaag aggccagaga ggctgggtcc
 960
 cctgcacagg agttcaagta tcagaagtcc cttcctcccc gattccagcg ccagcagcag
 1020
 caacaacagc aggagcagct gtaca
 1045

<210> 5198

<211> 283

<212> PRT

<213> Homo sapiens

<400> 5198

Leu Phe His Ser Phe Ser Phe Phe Leu Gly Pro Pro Ala Val Val Gly
 1 5 10 15
 Pro His Glu Glu Val Asp Tyr Ser Glu Lys Leu Lys Phe Ser Asp Asp
 20 25 30
 Glu Glu Glu Glu Glu Val Val Lys Asp Gly Arg Pro Lys Trp Asn Ser
 35 40 45
 Trp Asp Pro Arg Arg Gln Arg Gln Leu Ser Met Ser Ser Ala Asp Ser
 50 55 60
 Ala Asp Ala Lys Arg Thr Arg Glu Glu Gly Lys Asp Trp Ala Glu Ala
 65 70 75 80
 Val Gly Ala Ser Arg Val Val Arg Lys Ala Pro Asp Pro Gln Pro Pro
 85 90 95
 Pro Arg Lys Leu His Gly Trp Ala Pro Gly Pro Asp Tyr Gln Lys Ser
 100 105 110
 Ser Met Gly Ser Met Phe Arg Gln Gln Ser Ile Glu Asp Lys Glu Asp
 115 120 125
 Lys Pro Pro Pro Arg Gln Lys Phe Ile Gln Ser Glu Met Ser Glu Ala
 130 135 140
 Val Glu Arg Ala Arg Lys Arg Arg Glu Glu Glu Glu Arg Arg Ala Arg
 145 150 155 160
 Glu Glu Arg Leu Ala Ala Cys Ala Ala Lys Leu Lys Gln Leu Asp Gln
 165 170 175
 Lys Cys Lys Gln Ala Arg Lys Ala Gly Glu Ala Arg Lys Gln Ala Glu
 180 185 190
 Lys Glu Val Pro Trp Ser Pro Ser Ala Glu Lys Ala Ser Pro Gln Glu
 195 200 205
 Asn Gly Pro Ala Val His Lys Gly Ser Pro Glu Phe Pro Ala Gln Glu
 210 215 220
 Thr Pro Thr Thr Phe Pro Glu Glu Ala Pro Thr Val Ser Pro Ala Val
 225 230 235 240
 Ala Gln Ser Asn Ser Ser Glu Glu Glu Ala Arg Glu Ala Gly Ser Pro
 245 250 255
 Ala Gln Glu Phe Lys Tyr Gln Lys Ser Leu Pro Pro Arg Phe Gln Arg

260
 Gln Gln Gln Gln Gln Gln Gln Glu Gln Leu Tyr
 275 280

<210> 5199
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 5199
 nnactagtgc agagtgttta gagatcactc agtttttaaa gactggcctt tatcgtgtct
 60
 cagtgcagcc gaggcagagc ctttgaagga tgcgatgttg tcattcttac taatctagtc
 120
 cagccgtga ggtgactttc aacggcagac cgtctcctga gcgccccagg tagaatttca
 180
 aaagtctccg ggaccattat ggcagtcaag tggacgggtg ggcattcttc tcctgtcctc
 240
 tgcctgaatg caagtaaaga agggctgctg gcttctggag cagagggcgg agatctcacg
 300
 gcttgggggtg aagatggaac tccattagga cacacgcggt tccaaggggc tgatgatgtt
 360
 accagtgtct tattttctcc ctctgtccc accaagctct atgcctcaca tggagaaacc
 420
 attagtgtac tggatgtcag gtccctcaaa gattccttgg accattttca tgtgaatgaa
 480
 gaagaaatca attgtctttc attgaatcaa acggaanaacc tgctggcttc tgetgacgac
 540
 tctggggcaa tcaaaatcct agacttgga aacaagaaag ttatcagatc cttgaagaga
 600
 cattccaata tctgctcttc agtggctttt cggcctcaga ggctcagag cctgggtgtca
 660
 tgtggactgg atatgcaggt gatgctgtgg agtcttcaaa aagcccgacc actctggatt
 720
 acaaatttac aggaggatga aacagaagaa atggaaggcc cacagtcacc tggtcagctc
 780
 ttaaaccctg ccctagccca ttctatctct gtggcttcgt gtggtaatat ttttagttgt
 840
 ggtgcagaag atggttaaggt tcgaatcttt cgggtgatgg gagttaagtg tgaacaggaa
 900
 ctgggattta agggccacac ttcaggggta tcccaggctc gctttctccc agaatcctat
 960
 ttgctgctta ctggagggaa tgatgggaag atcacgttgt gggatgcaaa cagtgaagtt
 1020
 gagaaaaaac agaagagtcc cacaaaacgt acccacagga agaaaccta aagagggaact
 1080
 tgcaccaagc aggggtggaaa tactaacgct tcagtaacag atgaggaaga acatggcaac
 1140
 attttaccga agctaaatat tgaacatgga gaaaaagtga actggctctt gggtaaaaa
 1200
 ataaagggac accaaaatat attagtagct gatcaaaacta gttgtatata tgtatacccc
 1260
 ttaaataaat tttaaatcca ataaaaacat ttgaagaatt gtggcaaac tgtttttcag
 1320

attaaaaaaaa aa
1332

<210> 5200
<211> 358
<212> PRT
<213> Homo sapiens

<400> 5200
Met Ala Val Lys Trp Thr Gly Gly His Ser Ser Pro Val Leu Cys Leu
1 5 10 15
Asn Ala Ser Lys Glu Gly Leu Leu Ala Ser Gly Ala Glu Gly Gly Asp
20 25 30
Leu Thr Ala Trp Gly Glu Asp Gly Thr Pro Leu Gly His Thr Arg Phe
35 40 45
Gln Gly Ala Asp Asp Val Thr Ser Val Leu Phe Ser Pro Ser Cys Pro
50 55 60
Thr Lys Leu Tyr Ala Ser His Gly Glu Thr Ile Ser Val Leu Asp Val
65 70 75 80
Arg Ser Leu Lys Asp Ser Leu Asp His Phe His Val Asn Glu Glu Glu
85 90 95
Ile Asn Cys Leu Ser Leu Asn Gln Thr Glu Asn Leu Leu Ala Ser Ala
100 105 110
Asp Asp Ser Gly Ala Ile Lys Ile Leu Asp Leu Glu Asn Lys Lys Val
115 120 125
Ile Arg Ser Leu Lys Arg His Ser Asn Ile Cys Ser Ser Val Ala Phe
130 135 140
Arg Pro Gln Arg Pro Gln Ser Leu Val Ser Cys Gly Leu Asp Met Gln
145 150 155 160
Val Met Leu Trp Ser Leu Gln Lys Ala Arg Pro Leu Trp Ile Thr Asn
165 170 175
Leu Gln Glu Asp Glu Thr Glu Glu Met Glu Gly Pro Gln Ser Pro Gly
180 185 190
Gln Leu Leu Asn Pro Ala Leu Ala His Ser Ile Ser Val Ala Ser Cys
195 200 205
Gly Asn Ile Phe Ser Cys Gly Ala Glu Asp Gly Lys Val Arg Ile Phe
210 215 220
Arg Val Met Gly Val Lys Cys Glu Gln Glu Leu Gly Phe Lys Gly His
225 230 235 240
Thr Ser Gly Val Ser Gln Val Cys Phe Leu Pro Glu Ser Tyr Leu Leu
245 250 255
Leu Thr Gly Gly Asn Asp Gly Lys Ile Thr Leu Trp Asp Ala Asn Ser
260 265 270
Glu Val Glu Lys Lys Gln Lys Ser Pro Thr Lys Arg Thr His Arg Lys
275 280 285
Lys Pro Lys Arg Gly Thr Cys Thr Lys Gln Gly Gly Asn Thr Asn Ala
290 295 300
Ser Val Thr Asp Glu Glu His Gly Asn Ile Leu Pro Lys Leu Asn
305 310 315 320
Ile Glu His Gly Glu Lys Val Asn Trp Leu Leu Gly Thr Lys Ile Lys
325 330 335
Gly His Gln Asn Ile Leu Val Ala Asp Gln Thr Ser Cys Ile Ser Val
340 345 350
Tyr Pro Leu Asn Glu Phe

355

<210> 5201

<211> 6104

<212> DNA

<213> Homo sapiens

<400> 5201

nngtgccagt cgtgctttgt gaaaaataac aaagtgggtca cagaaatttg tgatctgaaa
60
accgggctcc cttccccaca aggtccttgg gcctccggga agacggggcc ctgtttgcca
120
tctcgggggt gttccctgtg ggaggggtgag tgggtgaggc cgagcctgct gcgtgtggag
180
cctcgagtgg gccctggctg ccactaccgc acagaggccg tgcgcgctg ggctgggctt
240
gggtggcctc tgtctttgca tctctgagaa ggagtcgggt ggtaacgggt ggggtcagga
300
agaattctgc caagtatctt tactgtcatt ctgaccatag cctctttgtt cccgcattcg
360
aacttttggt tcttactttg ctgctcggtt agtccttggg gatttcagat cttaggctgt
420
tgtttcaccg tatgggaggg ttgatgtgag cttgcttggg gacacacggg gcagcatcag
480
ggaccttccc agggcccagc aaattcaagt cggctctgcag acctctcagc taccgcggg
540
acctcttgta acccatcggc atcttccagg aatccgccga gtgacttgag gaagatgcta
600
acgcagtaag gtctgtgctg ggccaagagc agctttgaag ctccagagaa ccaccccgtc
660
aggttccttg tggaagctcc cctcatccgt ggtgcagcag gctgagcact gcgcgtttgc
720
cacgtgctgc ccgtgacagc acattgagcc acagcatttg tagacaggac agaggggtgc
780
ctgccccctg cccctgctgg cacatttaac ccttgctccc tgacctcagt tctgtgcccc
840
accaaatgcc caggggcaag agggccacct ggaagctgcc aatcttcaa ggtgggtgtg
900
gggcacggtg ggggcgggca gctcccaggc ccttgggcag gctggggtga cggcagaggc
960
cacagcacca gctctgacaa gtcctatcat cctctgctca gcagcgacct ccctggcccc
1020
actttgcccc gagtttgagg tccccccagg tatagctata ggcggcagtg cctgtccctg
1080
gcctgccttg atttcagcca caccctgca gccctgcac ccagctctgg ggtgtgcaga
1140
ggtttgtgtc tccaggaac acacggctgg agagaaatag ggagatgcag gaagtggggg
1200
cccattgggg ccccaagaag cggactctcc aaggggtacc cccacccgc taccttcccc
1260
acggacgggc ccctcctgga gcccataccc tcctgtgagg ccattccagt gtcttctaga
1320
aagactcgct tgccaggagt gcgttctttg ttgaaaaatg ccctgaagcg aaaagatgca
1380

ggtttatatg gaacccccac cccctcccc actctcccac tctgttcggt ctgaatgtct
1440
tcacgagcgt gcatcagggc gcctggctcc cccacctcag ccagtgagtc agacacgggt
1500
ttcgagcca tgtttcttgg ctccgaggac acgggtggca ggcccgttgc agcccagagc
1560
cactgggtccc tacagggcgc cgccacacca gcaggaagga ggatggctgt gtccggagcc
1620
tggcggggag gcggcctccc cagtatgtga gtgcagggat ctgccagaac cacctggccc
1680
tctgtagggc gtttaactgg aaataccctc actgccaaagt ggagactggg gcgtgtgcca
1740
cattgccagc caccaggaaa gcttttcttt ttcttttttt tttttttttt aaacaccaag
1800
agcacgtata gcatggggga aagaacctaa atgtctctct gtctgtgag ctggtgaaaa
1860
accagcatg agaacgcagt gtcaggtgtg ggactccttc tgcccctgca gtgggtgtta
1920
cgggcggtgt gccctggcga gcaagctttg attcttggtt ctttgagctc gtttcagagg
1980
ctgagtcctc acatcagctt tagttcttgg acttccctgt attaagcaag aattaggaga
2040
atggtctgcc ctgcaggcgc cttccgtaaa tcctgagctc tctggcgcaa tctgaaactt
2100
ctcttctgtt ttctttggct gtatcagccg aaccaggaga ggctgggct gcgactaagg
2160
agaaagaaat cgggggtttc tgagagcaga tggcgcttt gtgggtgcag ggcttttgtg
2220
gaaattgtca gcctctacgg gcagagtcgc gcatcccctc cccagactgc ctgctgtcaa
2280
accacggagc agctggagcc tgccctgtcc acggcccgtt tccaccggg catgttcgtc
2340
tctcatgact tcggcagagg cccctgggtg ccttcagttt cagtttctca tccaggaagg
2400
taaccttggg cattggcagt gggtttccct atggcttga tccagattag aattgatctt
2460
tgttttctact ttccatagtt aataacatgc aaaataatga gaagaattta ttttaagggtg
2520
acagctatac tgggtccaaca tcgcctgctt attgtcaggg tacagaagtt taatactttc
2580
ttaatccagt ttttcaaact tctccctgta gaccgtaagg atgaattcca caataggatc
2640
ctttttaaaa tcgattttta attgttgctt agtctgcca aggttattat gtgcatctgt
2700
tatttttcca atacatgtaa acagttgcag catgatgctt tgtttaatgt cctgttctta
2760
agctcgtag agccagtttt gaaacgtttg gtcttaccgt gaacggaggc tggcttggct
2820
tagccacgct gatgagtaag tgagggatgt ctccatcttg agatcaccag gcaagagagt
2880
tgctgcacc aggtaagagg ccaaagcccc tggggaaca gtccccaccg ctaccgagg
2940
taaaacaata aaagctatgt ggttgagctc aggcctctcg tgccctgggtg cagagaaggc
3000

agagcccaca gtaggtgcag ggtgcaaggc cctgggaggg cactggccag ggaaggtggt
3060
atagatggcc ctcagattgc ggggccccga gcagctcccc actctgcccg tccaccttcc
3120
ctggctccag cctcattctc tctttagttt aactatgcaa agagaggagg ttgagagtgt
3180
tctggcagct ggagctcttt tctttgtcct tctgcccctc cgatggggcc acctgtgtcg
3240
gggcagcagt gtccatgttt atggagatca gaggtgtccc cactgtgtgg ctggactgta
3300
ctctgtctgc cgggtagcca ggagtctctc cctctctccc ctgcccctg cctggctctca
3360
tgggcctcct tcacacaccc ctccctgtgg atcgctgcc tgggcccaga gcaggggaac
3420
tggagtttgt gagtgcagc agcaggttat gtgcagacag ggaaacgaga actttggacc
3480
tggtttctg agtccagtg agagcttgtt gggccccga tgccactctg cccgccggag
3540
ggatgtgcct gctgagcctt ttcctccac gccgcctctc actgccaggc cagcggcttc
3600
cgctgagact cgctggagag gcggctcccg tgtccgtcca ccgagcactc agatggatgc
3660
tgatcaccag ggccgagggg gctcccagaa ggaccccagg ccctggggag ggtggctgtg
3720
ggaggccaag tccactgcc ggaagtcttg tcagccctaa gccagggaa cctggagcgt
3780
ggcctggcgg gtctgggtgg acaccgtccc cactccggac tcccagcaca ggggaggaga
3840
cctgagcctg tatggccctg tagccctggg cagagctggg cctgtcgtgt gttcctgctt
3900
ggcaggtgca ggtgctggcc atctgcaggt ggaaggaggt gggaatcttg gattttttgt
3960
ttttttttgt cttttttttt tttgagatga agtctcgtc tgnacacca ggctggcgtg
4020
cagtgggtg atctcggtc actgcaaact ccgttcctg ggttcaagt gttctcctgc
4080
cccagcctcc caagtagctg ggattacagg catgagccac cagctcagc tgatttttgt
4140
atttttagta gagatggggg ttcacatgt tggccaagct ggtctcaaac tctgacctc
4200
aagtgatctg cccgcctcgg cctcccagag tgctgggatt acaggcgtga gccagtgcac
4260
ccggcggaat cttggaattt ttatagacag cacctcagtt tctgactcca gccgcacacc
4320
tctgcctct accagcagg gttgccgcca gaccagagcc agggccaggt ccctgcgtcc
4380
atccccccg gtaggatgga cgtgagccat ccttctagg gacttttttc agtgtgcgac
4440
tcgtctctgt taggtggtag gagccagttt gtgtggcctg tgccacgctc cacagtgcgt
4500
ggctgggctc tgtgtgtggc ctgtgtcccc tgtccctgca ggaccagca ggcacgtgg
4560
cgtgacagct gtgtccaagc cactgcccgg gcacccatc accaccagg gtgcacggtc
4620

tctcctgctg ggggctttct gtcgcatgtg tgtctcctgt cgactctgca gtttgttctc
4680
agagcagaat gtttcctggt ctcaagtgcac aaagacactg gttttcaatc ggcgtctaaa
4740
accacgttcc tgcctttcat tgcaacacgg tgtgttcatt tgtttaaaac agtttaatga
4800
gtaagtttag atgactgggc aatatcttaa aaatgtatat tagtaagaag ttcttcctgg
4860
aatttttctt tcgattctgg cagaataaac aggtgttttt agttttccca ctgtctgagc
4920
caagcaggac cctgtcccag agcaagagat gtcccttcc atctctgacc ctgacctggg
4980
acaagctttg atggggggcc ccagcttcaa ggctgtggg ggaacagcac ccccaaatgc
5040
cagcctctcc tttcttccca tccaccagta tactgcgggg ccatttctgg tctttgtcca
5100
acaggaaacc catttctggt gggatatgcc ttccagtgc acagggccac tcacctatg
5160
catctctgtc ctgcccgtca gtgctgggac ggacagcaag ggcaagccca gtgtctggcg
5220
gataggtggg tgggaacaga gaggggagaa tgccgtccta agcttctgct tggggatccc
5280
ccacagacc tgggtactgc ctgggaaacc tgtcctaagt aaaactatgg acctgcctc
5340
gcccaccggc ctgcgaagcc agcatctccg tgaaggtgga tggaagcgc tttgtcctca
5400
ctttgagctg caagctgggt cagcggtct gaagccctcg agtgactttc taaccaaga
5460
cccagcccct ggcaggagga ggggtgggtgc agggctggg ggaacaaaag aggcctcagc
5520
aggcctggaa gacccttcca gtacatcca cagcgtgtcg agcagctggg agaacctgtg
5580
tcaagctcga gccgtcatag gtcccatga ggtgtctgaa gccccttctt ggtgatggga
5640
ggcagaggtg ctgacgttct ggagcatgga cgtgagtcct cagctggctc cgcgtgggcc
5700
cttggagggt gccagggtg tggtagcct ctggatgcct ttaacttcat ggctgcgtca
5760
ttcctgattt agaactttaa ccggagcttc atctagtat tgcaaaactg gaccaatggg
5820
aggacggcgg cgcagcccgc tccctccgtg gaatggagct cagctcttcg gaggcacaa
5880
agcacctgtc gcctccgtgg tccccctgcc gagggagtgc ggcctctgca aggttcgggg
5940
gtggcttcgt ttgcctggag tggccggccc tgcttgggcc atgtggatgt ttgtgagcct
6000
cggtcctaca gcactgtgta ggctgcatct gtttcgtgct ggtcctgttg acttgtatga
6060
tatccacaaa taaatatttt catggcggta aaaaaaaaaa aaaa
6104

<210> 5202

<211> 108

<212> PRT

<213> Homo sapiens

<400> 5202

```

Ser Pro Gly Pro Arg Gly Leu Pro Glu Gly Pro Gln Ala Leu Gly Arg
 1           5           10           15
Val Ala Val Gly Gly Gln Val His Cys Pro Glu Val Leu Ser Ala Leu
      20           25           30
Ser Gln Gly Ser Leu Glu Arg Gly Leu Ala Gly Leu Gly Gly His Arg
      35           40           45
Pro His Ser Gly Leu Pro Ala Gln Gly Arg Arg Pro Glu Pro Val Trp
      50           55           60
Pro Cys Ser Pro Gly Gln Ser Trp Ala Cys Arg Val Phe Leu Pro Gly
65           70           75           80
Arg Cys Arg Cys Trp Pro Ser Ala Gly Gly Arg Arg Trp Glu Ser Trp
      85           90           95
Ile Phe Cys Phe Phe Leu Ser Phe Phe Phe Leu Arg
      100           105

```

<210> 5203

<211> 1863

<212> DNA

<213> Homo sapiens

<400> 5203

```

gaaaatttgg tagaaaaaga gataagtggg tctaaagtca cttgtagaga tctttagtaa
60
tattttaagg cttacatcaa aatctatcaa ggagaagaac ttccacatcc aaagtccatg
120
cttcaggcaa cagctgaagc taataatctt gctgcagtag caggagcaag agatacctat
180
tgtaaaagta tggaacaggt atgtggaggg gacaagcctt acattgcacc ttcagatctg
240
gagcgaaaac acttgatct caaggaagtg gcgataaac aatttcgttc agtaaaaaag
300
atgggtggag atgagttctg ccgtcggtat caggaccagc ttgaagctga aattgaagaa
360
acctatgcaa attttataaa gcacaatgat ggcaaaaata tcttctatgc tgctcgtagc
420
ccagccacac tgtttgcggt catgtttgct atgtatataa tctcaggact gactggcttc
480
attggcctaa actctatagc tgtcttgtgt aaccttgtca tgggggttagc actgatattt
540
ctttgtactt gggcatatgt taaatactct ggggagttca gagaaattgg aacagtgatt
600
gatcagattg ctgaaacact atgggaacag gtattgaagc ccttgggtga taatttgatg
660
gaggaaaaca taaggcagtc tgtaacaaac tctatcaaag caggcctgac tgaccaggtg
720
tctcatcatg ccagattaaa gacagactga cagttcatct cctcacggac tccactctct
780
ttttttttca tgcttgctgt acaatgagaa ctcaaataaa aataaaccaa agtttacaat
840
caactgtaga agtagtttag tgtaactggc ttcacagatg gctgccacag agtggtgaaga
900

```

ttgtttgtta gttttaagca ttcttttaat ggctcctaag acatgcagat ggactgagga
 960
 gcattgggta atcatgcacc tttgtgccat gtttaactct tttatttttt tttacttaat
 1020
 ctaatgttag tgaatttgtc ttatgtaaaa ggatatttca gggaaatatt ttcagaaatc
 1080
 tatttagagt ctctttaaca cagtgtccca ttgaaatttt aatttttaga gaatttatga
 1140
 atcactgttt caagaaccag attggaaaga caatgaagcc tttattgagc cactacatta
 1200
 aaagtatata ttgctttact gccttcaata ccagtattac atcaatgcat gtatcagaaa
 1260
 cttcacagaa attacatggc aactcttgta gctaagaaag taattctgag gtgtacattt
 1320
 gtcttgccctt tttaaattta taaacttgcc ctaaaaggag atgcatatct gggaaactga
 1380
 actgtctttt tgcagtttag ccttcatgta tataaaatat gccattaatt ttattgggga
 1440
 agaaattcca tccaaaaatg ttgcctacag ctatgagtta agagtgtctg tacagtgtgt
 1500
 agctttttatt ttctaaaatc acagataggg catgtatatg acttataaat atataaatc
 1560
 gattttgtat taaaagtttt gtagtttatg gcaaaatctg gtcctgtggt aggctaaata
 1620
 agtacagtcc ctgtgaaagg aatgtttgtg gctcatgtca gtgtgtgaat gcatagacaa
 1680
 tttgaagttt ttgatatttt tgtgatattt atcttgagca ctgcaatctc accccccccc
 1740
 cccaccaag ggaattcaat gggaaatgtt attgtgactt tgcctctgt tgcattttta
 1800
 agttatttcc tgtaatttat tttcagtaca taattaaaaa tttgttgtat atataaaaaa
 1860
 aaa
 1863

<210> 5204

<211> 249

<212> PRT

<213> Homo sapiens

<400> 5204

Glu	Asn	Leu	Val	Glu	Lys	Glu	Ile	Ser	Gly	Ser	Lys	Val	Thr	Cys	Arg
1				5					10					15	
Asp	Leu	Val	Glu	Tyr	Phe	Lys	Ala	Tyr	Ile	Lys	Ile	Tyr	Gln	Gly	Glu
			20					25					30		
Glu	Leu	Pro	His	Pro	Lys	Ser	Met	Leu	Gln	Ala	Thr	Ala	Glu	Ala	Asn
			35				40					45			
Asn	Leu	Ala	Ala	Val	Ala	Gly	Ala	Arg	Asp	Thr	Tyr	Cys	Lys	Ser	Met
			50			55					60				
Glu	Gln	Val	Cys	Gly	Gly	Asp	Lys	Pro	Tyr	Ile	Ala	Pro	Ser	Asp	Leu
65				70						75				80	
Glu	Arg	Lys	His	Leu	Asp	Leu	Lys	Glu	Val	Ala	Ile	Lys	Gln	Phe	Arg
			85						90					95	
Ser	Val	Lys	Lys	Met	Gly	Gly	Asp	Glu	Phe	Cys	Arg	Arg	Tyr	Gln	Asp

```

<400> 5205
cggccggggcc ccagcatggg tgtccccacg gctgagggcc tggcagctgc tgcgccctcg
60
ctttcttgac attccctggc ttctgtgctc tttccccag gccaccccag cagacatgtt
120
gccaaaggcct ttcgggtcaa gtccaacacg gccatcaagg ggtcggacag gagaaagctt
180
cgagctgatg tgacaactgc tttccccacc cttggaactg atcaagtctc tgagttagta
240
cctggaaagg aggagctcaa cattgtgaag ttgtatgctc acaaagggga tgcagtgact
300
gtgtacgtga gtggtggtaa ccccatcctc tttgaactgg agaaaaatct gtatccaaca
360
gtgtacacgc tgtggtccta tcctgatctt ctgccaacct ttacaacatg gcctctggtg
420
ctcgagaaac tggtaggggg agcagatttg atgctgcttg gactggtgat gccccctgct
480
ggtctgcctc aggtacagaa gggcgacctc tgtgccattt ctttggtggg gaacagagcc
540
cctgtagcca ttggagttgc agccatgtcc acagctgaga tgctcacgtc aggcctgaag
600
ggaaggggct tctctgtgct ccacacttac caggaccact tgtggcggtc tggaaacaag
660
tcctctccac cttccattgc tccactggcc ctggattcag cagatctcag tgaagagaag
720
gggtctgtcc agatggactc caccctgcag ggagacatga ggcacatgac cctggagggg
780
gaagaggaga atggggaggt tcaccagggc acgtgaagac aatctctctc agaagcccca
840

```

gaagacacca gcaccagggg cctgaaccaa gactccacag atagcaaaac gcttcaagaa
 900
 caaatggatg agctgttaca gcaatgcttc ttacatgcct tgaagtgccg agtcaaaaaa
 960
 gctgacctcc ctttactcac cagcactttc cttggcagcc acatgttctc ctgctgcccc
 1020
 gaangacgac aactggacat aaagaagtca agctacaaaa agctctctaa gttcctgcag
 1080
 caaatgcagc aggagcagat tatacagggtg aaggagctga gcaaaggggt ggagagcatt
 1140
 gtggctgtgg actggaaaca cccgaggatt acatctttcg tcatacccca gccctccccg
 1200
 acctcccaga ctatccagga gggtagcagg gaacagccct atcacctcc agatataaaa
 1260
 cccctctact gtgtcccagc cagcatgacc ctgctcttcc aggagtctgg ccacaagaag
 1320
 gggagctttc tggagggcag tgaggtccga acgatcgta ttaactacgc caagaaaaat
 1380
 gacctgggtg atgcagacaa caaaaatctt gtgagattgg atcccatcct atgtgactgc
 1440
 atcttagaga aaaatgaaca gcatacagtc atgaagcttc catgggacag tcttctgacc
 1500
 aggtgtttgg aaaaattaca gcctgcctat caagtgacct tccccggaca agagcccatt
 1560
 gtgaagaaag ggagaatctg tccaattgac atcacccctag cacaagagc gtctaataaa
 1620
 aaggtagccg tgggtccgaa cttggaggcc tatgggtctgg acccatactc agtggctgcc
 1680
 atccttcagc agcgatgcca ggctagcacc accgtcaatc ctgcccctgg ggccaaggac
 1740
 agccttcagg tgcagatcca gggaaaccag gtccaccacc tcggctgggt attgcttgaa
 1800
 gagtatcagc tccctcgaaa acacatccaa ggtctagaaa aggccctcaa acctggcaag
 1860
 aagaagtgc agactctttt gtctcacgtg gtggatccgg tggaaatcca agctctgggc
 1920
 tggtaatttt tatgagcatt ttcagctttt gcaaatacaa aatataattc tttacaaaaa
 1980
 taaattttta ttctgatcta aaaaaaaaaa a
 2011

<210> 5206

<211> 248

<212> PRT

<213> Homo sapiens

<400> 5206

His	Ser	Leu	Ala	Ser	Val	Leu	Ser	Ser	Pro	Gly	His	Pro	Ser	Arg	His
1				5					10					15	
Val	Ala	Lys	Ala	Phe	Arg	Val	Lys	Ser	Asn	Thr	Ala	Ile	Lys	Gly	Ser
			20					25					30		
Asp	Arg	Arg	Lys	Leu	Arg	Ala	Asp	Val	Thr	Thr	Ala	Phe	Pro	Thr	Leu
			35				40					45			
Gly	Thr	Asp	Gln	Val	Ser	Glu	Leu	Val	Pro	Gly	Lys	Glu	Glu	Leu	Asn

50 55 60
 Ile Val Lys Leu Tyr Ala His Lys Gly Asp Ala Val Thr Val Tyr Val
 65 70 75 80
 Ser Gly Gly Asn Pro Ile Leu Phe Glu Leu Glu Lys Asn Leu Tyr Pro
 85 90 95
 Thr Val Tyr Thr Leu Trp Ser Tyr Pro Asp Leu Leu Pro Thr Phe Thr
 100 105 110
 Thr Trp Pro Leu Val Leu Glu Lys Leu Val Gly Gly Ala Asp Leu Met
 115 120 125
 Leu Pro Gly Leu Val Met Pro Pro Ala Gly Leu Pro Gln Val Gln Lys
 130 135 140
 Gly Asp Leu Cys Ala Ile Ser Leu Val Gly Asn Arg Ala Pro Val Ala
 145 150 155 160
 Ile Gly Val Ala Ala Met Ser Thr Ala Glu Met Leu Thr Ser Gly Leu
 165 170 175
 Lys Gly Arg Gly Phe Ser Val Leu His Thr Tyr Gln Asp His Leu Trp
 180 185 190
 Arg Ser Gly Asn Lys Ser Ser Pro Pro Ser Ile Ala Pro Leu Ala Leu
 195 200 205
 Asp Ser Ala Asp Leu Ser Glu Lys Gly Ser Val Gln Met Asp Ser
 210 215 220
 Thr Leu Gln Gly Asp Met Arg His Met Thr Leu Glu Gly Glu Glu Glu
 225 230 235 240
 Asn Gly Glu Val His Gln Gly Thr
 245

<210> 5207

<211> 594

<212> DNA

<213> Homo sapiens

<400> 5207

ncggccggcc agggcagggg gcacctagga cggccccggt ccaggtggag gccgcagagg
 60
 gccacaggga agcagaggga gcaatggttg gtctcgacgg tggctgagcc ccagcccct
 120
 ggaatatgca gcccggggga gcccagaca gcggcaagga cgaggtggcg gagggggag
 180
 ggaggcatgg tctccacctt ccgggtggcc gtgctggggg cgcgaggtgt gggcaagagt
 240
 gccatcgctg gccagttctt gtacaacgag ttcagcgagg tctgcgtccc caccaccgcc
 300
 cgccgccttt acctgcctgc tgctgctcatg aacggccacg tgcacgacct ccagatcctc
 360
 gactttccac ccatcagcgc cttccctgtc aatacgtccc aggagtgggc agacacctgc
 420
 tgcaggggac tccggagtgt ccacgcctac atcctggtct acgacatctg ctgctttgac
 480
 agctttgagt acgtcaagac catccgccag cagatcctgg agacgagggt gatcggaacc
 540
 tcagagacgc ccatcatcat cgtgggcaac aagcgggacc tgcagcgagg acgc
 594

<210> 5208

```

<400> 5209
atcctgtggg gcctgaagct tgtcatcttc ctggccggct tctgtggcct gatgaggtcg
60
gtgcctgacc cttccacccg ggccctgcta ctectggcct tgctgatact ctacgccctg
120
ctgagccggc tcaactggctc ccgagcctct ggggcccaac tcgaggccaa ggtgcgaggg
180
ctggaacgcc aggtggagga gctgcgctgg cgccagaggc gagcggccaa gggggcccgc
240
agtgtggagg aggagtgagc cggatgcccc acacaccgcc agtgtcatac caaagagctg
300
agctgcttcg gggccatgca gccctcctgc cagccccctg cccttttctt gccctgtctc
360
tgaaccttca gaacattgat ccttgccgca gcccactag ccaagagaaa cagagaaaga
420
ccattcccc tgctgtcct tgcggccctg tcttctgagg ttctctgtct ggggttggct
480
ctcttaaccc tttctctgct ccgagcctgc ctccaccagg aaggttggag gggcctccct
540
ctggcttctg catctgcgcc agcaaacatc actgccgttg gtctctcatg acttaactgg
600
cttccctctg ctgctgcctt ggcttccctc taatgctcgt gctctcctgt ccttctgaag
660
ttgtcccttg gccaaatctc cagctccctt cttgttttcc tcatcctct accctgtact
720

```


cccaccaaac catggtcctt taaggcacgc tcctgtcctc ctcattgccc agcagtaggg
 780
 aggggcaggg gtaaggggac ctgaggataa aggggtggga aacaggggcc cctgaggcct
 840
 gtgggggctg caggggagga ggatgtacct tgtgtctctt tcaagtgcct taatccgagc
 900
 cagcagggcc ttctgcttgc ctgctgccat actgtatgta ggaaagtgtt ctgtggctgc
 960
 tttgtgtcaa gaaaagagca gtcactctca gaatcttgat tccccatcag ccaaagcaaa
 1020
 agatggctgc tgctttgtag gcatgtgcct gcaagtggga ccttgctggg cattatatgc
 1080
 cctgtggggg ttccagagac cctgaaagag gagggaggac ccgcctcctt gtctgcacaa
 1140
 ctgcatgcac ttctctcccc atcgctccac aacctgaaac cgagaaggag ttgctgacca
 1200
 gtgcccaccc cggcagcccg ggaggaacac aggcagctcc tttcccttca cgtggtctgc
 1260
 agagagcagg gtgagctgcc agctgcccct ctccaccagg gtaccctgtc ttggtgggta
 1320
 ggggccactt ttcctttgag gctctagtgg aggtggatgt ccttctctgc caggcttggc
 1380
 acatgatgtg aagaataaat gcccaattct tactgttcag gtttgatgtg gaatcacagc
 1440
 tgcagtgata tatatttttt atcagtgcct gggtgggttt aaataaagtg cacgctattt
 1500
 tattatcttg ttctgaataa aatgtattta ctccaaaaaa aaaaaaaaaa aaaaaaaaaa
 1560
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1592

<210> 5210

<211> 85

<212> PRT

<213> Homo sapiens

<400> 5210

Ile	Leu	Trp	Gly	Leu	Lys	Leu	Val	Ile	Phe	Leu	Ala	Gly	Phe	Val	Ala
1				5					10					15	
Leu	Met	Arg	Ser	Val	Pro	Asp	Pro	Ser	Thr	Arg	Ala	Leu	Leu	Leu	Leu
			20					25					30		
Ala	Leu	Leu	Ile	Leu	Tyr	Ala	Leu	Leu	Ser	Arg	Leu	Thr	Gly	Ser	Arg
		35					40						45		
Ala	Ser	Gly	Ala	Gln	Leu	Glu	Ala	Lys	Val	Arg	Gly	Leu	Glu	Arg	Gln
		50				55					60				
Val	Glu	Glu	Leu	Arg	Trp	Arg	Gln	Arg	Arg	Ala	Ala	Lys	Gly	Ala	Arg
65					70					75				80	
Ser	Val	Glu	Glu	Glu											
				85											

<210> 5211

<211> 602

<212> DNA

<213> Homo sapiens

<400> 5211
gcagttcagt ctttgattgg ttgctgagag gcggggctac tcgactgctc tggaggtagc
60
ggccgcggtg aggagagcca tgggacgggc agtcaagggt ttacagctct ttaaaacact
120
gcacaggacc agacaacaag tttttaaaaa tgatgccaga gcattagaag cagccagaat
180
aaagataaat gaagaattca aaaataataa aagtgaaact tcttctaaga aaatagaaga
240
gctaataaaa ataggttctg atgttgaatt attactcaga acatctgtta tacaagggtat
300
tcacacagac cacaatacac tgaaactggt ccctaggaaa gaccttcttg tagaaaatgt
360
gccatattgt gatgcaccaa ctcagaagca atgagttttc tagaatacaa caagtctttg
420
tactttttta ctttaaaatc tacaactctg gcaaaagtcc tggaaatgca gacattttcc
480
ctgaactggc atattgaaaa tgaatgaatt acagaatagc ttcattttta aatttcattg
540
taaaagggtc ttactgagaa ctaaagaaca taattaagta tttctaaagg aaattagata
600
ag
602

<210> 5212
<211> 104
<212> PRT
<213> Homo sapiens

<400> 5212
Met Gly Arg Ala Val Lys Val Leu Gln Leu Phe Lys Thr Leu His Arg
1 5 10 15
Thr Arg Gln Gln Val Phe Lys Asn Asp Ala Arg Ala Leu Glu Ala Ala
20 25 30
Arg Ile Lys Ile Asn Glu Glu Phe Lys Asn Asn Lys Ser Glu Thr Ser
35 40 45
Ser Lys Lys Ile Glu Glu Leu Met Lys Ile Gly Ser Asp Val Glu Leu
50 55 60
Leu Leu Arg Thr Ser Val Ile Gln Gly Ile His Thr Asp His Asn Thr
65 70 75 80
Leu Lys Leu Val Pro Arg Lys Asp Leu Leu Val Glu Asn Val Pro Tyr
85 90 95
Cys Asp Ala Pro Thr Gln Lys Gln
100

<210> 5213
<211> 4387
<212> DNA
<213> Homo sapiens

<400> 5213
nnccgcggag ctacggtttc ctccagaggt ctccgcccct ctgcccctat attcccagaa
60

cccgagtctg atccgggcct tgccgggcac cctggaaagg cgggggtgat agtacagatg
120
gagacgcaac tgcagagcat tttcgaagag gtggtgaaaa cggaagttat agaagaggct
180
tttcttgga tgtttatgga tactcctgaa gatgagaaaa caaaactaat tagctgtttg
240
ggggccttca gacagttttg ggggtggactt tctcaggagt ctcatgaaca gtgtatccag
300
tggattgtta agtttattca tggtcagcat agtcctaaaa gaatttcttt tctttatgac
360
tgcttagcaa tggcagttga gactggtctc cttccacca ggctggtttg tgaatccctg
420
ataaactctg acactcttga gtgggaaaga acacagcttt gggccttaac atttaaactg
480
gttcggaaaa taattggggg agtggattac aagggtgttc gagatctctt aaaagtgatt
540
ttggagaaga ttttgacaat tcctaataca gtgagctctg ctgttgata gcagcttctg
600
gcagcaagag aggttatagc atatatcttg gaaagaaatg cctgcttatt accagcctat
660
tttgagtcga ctgagatcag gaaactgtat cctgaaggca aacttcaca ctggttactt
720
ggaaacctag tatcagactt tgtggatacc ttcaggccca cagcaaggat aaactccatt
780
tgtggtcgct gtagtcttct gccagttgta aataattcgg gtgccatttg taattcatgg
840
aaactggatc ctgctactct tcgttttctt ttgaaaggcc ttttgccata tgataaggat
900
ctgtttgaac cacagactgc tttgttgaga tatgtattgg agcagcctta ttccagggat
960
atggtctgca atatgctagg tttaaataag cagcacaagc agcgctgccc tgtgctggag
1020
gaccagttgg tggatctggt tgtttatgcc atggagcgat ctgagaccga ggagaagttt
1080
gacgatgggg gaacaagcca actcctgtgg cagcatctct caagtcagct cattttcttt
1140
gtgcttttcc agtttgcaag tttccacat atggtgcttt ctcttcatca gaagttagca
1200
gggcgaggac tgattaaagg cagagatcat cttatgtggg ttctcctgca attcatttct
1260
ggaagtattc agaaaaatgc actagctgat tttctccctg tgatgaagct cttcgacttg
1320
ctataccag aaaaagaata tatcccagtt cctgatatta acaaacccca gtcaacccat
1380
gcctttgcaa tgacctgtat ttggattcat ctcaatagaa aagctcaaaa tgacaactcc
1440
aagctacaga ttccaatacc tcattcccta agacttcacc atgagttcct gcagcagagt
1500
ctaagacata aaagtttaca gatgaatgac tataagattg ctctattgtg taatgcatac
1560
tctacaaatt cagaatgtgt tacattaccc atgggagctc tggtagaaac tatttatgga
1620
aatggaatta tgagactacc tctccctgga acaaactgta tggcttcagc atctattacc
1680

cccttaccta tgaacctcct ggattcactg acagttcatg ccaaaatgag ccttattcac
1740
agcattgcaa ccagggtgat aaaacttgct catgcaaagt ccagtgtggc cttggctcca
1800
gccctagtgg aaacttacag tcgtttattg gtctatatgg aaatagagtc tttgggcac
1860
aaaggattta tcagtcagct ttgccaact gtgttcaaact cacatgcatg ggggatctta
1920
cacacactcc ttgagatggt tagctaccgg atgcatcata ttcagcctca ttacagagtt
1980
cagctcctga gtcattctta tactttggct gcagttgcac aaacaaacca gaaccagtc
2040
catctttgtg tcgagagcac tgctctcagg cttataacag cattaggtag ctgagaggta
2100
caaccgcagt ttacacgctt ccttagtgat cccaaaacag tgctctcagc agaatctgaa
2160
gaactgaacc gagccttgat attgacctg gctagagcaa ctcatgtaac agattttttt
2220
acaggctctg attcaattca gggaacttgg tgtaaagaca tacttcagac catcatgagt
2280
ttcactcctc ataattgggc ttcacacacc ctgagctggt ttccaggccc actacaggca
2340
ttcttcaaac aaaataatgt gcctcaggaa agccgtttta atctgaaaaa aaatgtggag
2400
gaggagtata ggaagtggaa gtcaatgagc aacgaaaacg acattattac ccacttctct
2460
atgcagggtt cccctcctct ctttctttgt cttctctgga aaatgctctt ggaacagat
2520
catattaatc agattggcta tagagtatta gagagaattg gagccagggc cttggtagcc
2580
catgtgagga catttgcaga tttcctggta tatgagtttt ctacatcagc aggggggtcag
2640
caactcaata aatgcattga aattcttaat gacatggtat ggaagtataa cattgttaca
2700
ctggacagat taattctctg cctggccatg cgtagtcacg aaggaaatga agcccagggt
2760
tgttatttca taattcagtt gctgttactc aaaccaaacg attttagaaa tcgagtaagt
2820
gactttgtga aggaaaattc cccagagcac tggttacaga atgactggca caccaagcac
2880
atgaattatc acaagaaata tccagagaag ttgtattttg agggcctcgc ggaacagggt
2940
gacccctctg tacagatcca gtctccctat ctgccatct attttgggaa tgtgtgtctt
3000
cgattccttc cagtatttga tatagtaatc cacagatttt tagagttgct tccggtatcc
3060
aaatcactgg agactctact ggatcatcta ggaggcttat ataaatttca tgatcgtcca
3120
gtgacttatc tgtataacac tctgcactat tatgaaatgc acctgagaga ccgcgcattt
3180
ctcaaacgaa aactcgtcca tgcgatcatt ggctctctga aggataatcg accgcagggc
3240
tggtgtctaa gtgacactta cctgaaatgc gctatgaatg cacgagagga aaatccttgg
3300

gttccagatg acacctacta ttgcagattg attggcagac tagtcgatac gatggctggc
 3360
 aaatctcctg gtccctttcc aaactgtgac tggagattca atgagtttcc caaccagct
 3420
 gcccagctc tccatgttac ttgtgtggag ctcatggcct tggcagtttc aggcaaagaa
 3480
 gttgggaatg cccttctaaa tgttgccta aaaagtcagc ctttagtgcc aagagagaac
 3540
 attacagcat ggatgaatgc aattggtttg atcatcactg ccctaccaga gccatattgg
 3600
 attgttcttc atgatcgaat tgtgagtgtc atcagcagcc ccagcttgac gtctgaaaca
 3660
 gagtgggttg gctatccatt ccgcctcttt gatttcactg cctgtcatca gtctactct
 3720
 gagatgagtt gtagctatac gttagctctt gcacatgctg tgtggcacca ttctagcatc
 3780
 ggacaacttt ctctcattcc aaagtttctt actgaagtac ttcttcctat agtgaagacc
 3840
 gaattccagt tgctttatgt ataccatctt gttggaccat ttttacaag atttcagcaa
 3900
 gagagaactc gttgtatgat agagattggg gtggcgtttt atgacatgct gctgaatggt
 3960
 gaccagtgtg gcacccattt aaattacatg gatcccatct gtgacttcct ctatcacatg
 4020
 aagtatatgt ttactggtga cagcgtgaaa gagcaagtag agaagattat ctgtaactta
 4080
 aaaccagctt taaaacttcg tcttcgatcc atcacacaca ttagcaagat ggagccagct
 4140
 gcagtgcctc cacaagccat gaacagtggg tctccagcac ctcatgtctaa tcagggttgac
 4200
 actctcacct gacagatgat gtaattcttc aatttttata atcttaaaat ttttaaattt
 4260
 tatatttgta aatacagtac acattttatt tcttggattt tgagagacat tgtaattttt
 4320
 gggggaattg gcattgcgaa agacttgaaa actaatgagt aaagtctgct gaatgaataa
 4380
 accaaaa
 4387

<210> 5214

<211> 1364

<212> PRT

<213> Homo sapiens

<400> 5214

Met	Glu	Thr	Gln	Leu	Gln	Ser	Ile	Phe	Glu	Glu	Val	Val	Lys	Thr	Glu
1				5				10					15		
Val	Ile	Glu	Glu	Ala	Phe	Pro	Gly	Met	Phe	Met	Asp	Thr	Pro	Glu	Asp
		20					25				30				
Glu	Lys	Thr	Lys	Leu	Ile	Ser	Cys	Leu	Gly	Ala	Phe	Arg	Gln	Phe	Trp
		35				40					45				
Gly	Gly	Leu	Ser	Gln	Glu	Ser	His	Glu	Gln	Cys	Ile	Gln	Trp	Ile	Val
	50				55					60					
Lys	Phe	Ile	His	Gly	Gln	His	Ser	Pro	Lys	Arg	Ile	Ser	Phe	Leu	Tyr

4394

	500		505		510										
Asn	Cys	Met	Ala	Ser	Ala	Ser	Ile	Thr	Pro	Leu	Pro	Met	Asn	Leu	Leu
	515						520					525			
Asp	Ser	Leu	Thr	Val	His	Ala	Lys	Met	Ser	Leu	Ile	His	Ser	Ile	Ala
	530					535					540				
Thr	Arg	Val	Ile	Lys	Leu	Ala	His	Ala	Lys	Ser	Ser	Val	Ala	Leu	Ala
	545				550					555				560	
Pro	Ala	Leu	Val	Glu	Thr	Tyr	Ser	Arg	Leu	Leu	Val	Tyr	Met	Glu	Ile
			565						570					575	
Glu	Ser	Leu	Gly	Ile	Lys	Gly	Phe	Ile	Ser	Gln	Leu	Leu	Pro	Thr	Val
		580						585					590		
Phe	Lys	Ser	His	Ala	Trp	Gly	Ile	Leu	His	Thr	Leu	Leu	Glu	Met	Phe
	595					600						605			
Ser	Tyr	Arg	Met	His	His	Ile	Gln	Pro	His	Tyr	Arg	Val	Gln	Leu	Leu
	610					615					620				
Ser	His	Leu	His	Thr	Leu	Ala	Ala	Val	Ala	Gln	Thr	Asn	Gln	Asn	Gln
	625				630					635				640	
Leu	His	Leu	Cys	Val	Glu	Ser	Thr	Ala	Leu	Arg	Leu	Ile	Thr	Ala	Leu
			645						650					655	
Gly	Ser	Ser	Glu	Val	Gln	Pro	Gln	Phe	Thr	Arg	Phe	Leu	Ser	Asp	Pro
		660						665				670			
Lys	Thr	Val	Leu	Ser	Ala	Glu	Ser	Glu	Glu	Leu	Asn	Arg	Ala	Leu	Ile
	675						680					685			
Leu	Thr	Leu	Ala	Arg	Ala	Thr	His	Val	Thr	Asp	Phe	Phe	Thr	Gly	Ser
	690					695					700				
Asp	Ser	Ile	Gln	Gly	Thr	Trp	Cys	Lys	Asp	Ile	Leu	Gln	Thr	Ile	Met
	705				710					715				720	
Ser	Phe	Thr	Pro	His	Asn	Trp	Ala	Ser	His	Thr	Leu	Ser	Cys	Phe	Pro
			725					730						735	
Gly	Pro	Leu	Gln	Ala	Phe	Phe	Lys	Gln	Asn	Asn	Val	Pro	Gln	Glu	Ser
		740						745					750		
Arg	Phe	Asn	Leu	Lys	Lys	Asn	Val	Glu	Glu	Glu	Tyr	Arg	Lys	Trp	Lys
	755					760						765			
Ser	Met	Ser	Asn	Glu	Asn	Asp	Ile	Ile	Thr	His	Phe	Ser	Met	Gln	Gly
	770					775					780				
Ser	Pro	Pro	Leu	Phe	Leu	Cys	Leu	Leu	Trp	Lys	Met	Leu	Leu	Glu	Thr
	785				790					795				800	
Asp	His	Ile	Asn	Gln	Ile	Gly	Tyr	Arg	Val	Leu	Glu	Arg	Ile	Gly	Ala
			805						810					815	
Arg	Ala	Leu	Val	Ala	His	Val	Arg	Thr	Phe	Ala	Asp	Phe	Leu	Val	Tyr
		820						825					830		
Glu	Phe	Ser	Thr	Ser	Ala	Gly	Gly	Gln	Gln	Leu	Asn	Lys	Cys	Ile	Glu
	835						840					845			
Ile	Leu	Asn	Asp	Met	Val	Trp	Lys	Tyr	Asn	Ile	Val	Thr	Leu	Asp	Arg
	850					855					860				
Leu	Ile	Leu	Cys	Leu	Ala	Met	Arg	Ser	His	Glu	Gly	Asn	Glu	Ala	Gln
	865				870					875				880	
Val	Cys	Tyr	Phe	Ile	Ile	Gln	Leu	Leu	Leu	Leu	Lys	Pro	Asn	Asp	Phe
			885						890					895	
Arg	Asn	Arg	Val	Ser	Asp	Phe	Val	Lys	Glu	Asn	Ser	Pro	Glu	His	Trp
		900						905					910		
Leu	Gln	Asn	Asp	Trp	His	Thr	Lys	His	Met	Asn	Tyr	His	Lys	Lys	Tyr
	915						920					925			
Pro	Glu	Lys	Leu	Tyr	Phe	Glu	Gly	Leu	Ala	Glu	Gln	Val	Asp	Pro	Pro

930 935 940
 Val Gln Ile Gln Ser Pro Tyr Leu Pro Ile Tyr Phe Gly Asn Val Cys
 945 950 955 960
 Leu Arg Phe Leu Pro Val Phe Asp Ile Val Ile His Arg Phe Leu Glu
 965 970 975
 Leu Leu Pro Val Ser Lys Ser Leu Glu Thr Leu Leu Asp His Leu Gly
 980 985 990
 Gly Leu Tyr Lys Phe His Asp Arg Pro Val Thr Tyr Leu Tyr Asn Thr
 995 1000 1005
 Leu His Tyr Tyr Glu Met His Leu Arg Asp Arg Ala Phe Leu Lys Arg
 1010 1015 1020
 Lys Leu Val His Ala Ile Ile Gly Ser Leu Lys Asp Asn Arg Pro Gln
 1025 1030 1035 1040
 Gly Trp Cys Leu Ser Asp Thr Tyr Leu Lys Cys Ala Met Asn Ala Arg
 1045 1050 1055
 Glu Glu Asn Pro Trp Val Pro Asp Asp Thr Tyr Tyr Cys Arg Leu Ile
 1060 1065 1070
 Gly Arg Leu Val Asp Thr Met Ala Gly Lys Ser Pro Gly Pro Phe Pro
 1075 1080 1085
 Asn Cys Asp Trp Arg Phe Asn Glu Phe Pro Asn Pro Ala Ala His Ala
 1090 1095 1100
 Leu His Val Thr Cys Val Glu Leu Met Ala Leu Ala Val Ser Gly Lys
 1105 1110 1115 1120
 Glu Val Gly Asn Ala Leu Leu Asn Val Val Leu Lys Ser Gln Pro Leu
 1125 1130 1135
 Val Pro Arg Glu Asn Ile Thr Ala Trp Met Asn Ala Ile Gly Leu Ile
 1140 1145 1150
 Ile Thr Ala Leu Pro Glu Pro Tyr Trp Ile Val Leu His Asp Arg Ile
 1155 1160 1165
 Val Ser Val Ile Ser Ser Pro Ser Leu Thr Ser Glu Thr Glu Trp Val
 1170 1175 1180
 Gly Tyr Pro Phe Arg Leu Phe Asp Phe Thr Ala Cys His Gln Ser Tyr
 1185 1190 1195 1200
 Ser Glu Met Ser Cys Ser Tyr Thr Leu Ala Leu Ala His Ala Val Trp
 1205 1210 1215
 His His Ser Ser Ile Gly Gln Leu Ser Leu Ile Pro Lys Phe Leu Thr
 1220 1225 1230
 Glu Val Leu Leu Pro Ile Val Lys Thr Glu Phe Gln Leu Leu Tyr Val
 1235 1240 1245
 Tyr His Leu Val Gly Pro Phe Leu Gln Arg Phe Gln Gln Glu Arg Thr
 1250 1255 1260
 Arg Cys Met Ile Glu Ile Gly Val Ala Phe Tyr Asp Met Leu Leu Asn
 1265 1270 1275 1280
 Val Asp Gln Cys Ser Thr His Leu Asn Tyr Met Asp Pro Ile Cys Asp
 1285 1290 1295
 Phe Leu Tyr His Met Lys Tyr Met Phe Thr Gly Asp Ser Val Lys Glu
 1300 1305 1310
 Gln Val Glu Lys Ile Ile Cys Asn Leu Lys Pro Ala Leu Lys Leu Arg
 1315 1320 1325
 Leu Arg Phe Ile Thr His Ile Ser Lys Met Glu Pro Ala Ala Val Pro
 1330 1335 1340
 Pro Gln Ala Met Asn Ser Gly Ser Pro Ala Pro Gln Ser Asn Gln Val
 1345 1350 1355 1360
 Asp Thr Leu Thr

<210> 5215
 <211> 548
 <212> DNA
 <213> Homo sapiens

<400> 5215
 nacgcgtgat ccatgggagg aggtaacatg tcaggatgag cggaagtttg gaagaagttg
 60
 gtcccaggcc tgaaagatca ctgtgagggg tcaggacttc agtggaggag ggactgtaga
 120
 ggttttagaa gcagcaagag aactagaatg agaaggactt ggagatgtga ctgcattgtc
 180
 gctgtctcgc gagaaaactt taacacgtga ggagttgcct ctgaaggggtg agcagggggag
 240
 ttgcttcagt tgcgctctag tcccagtga gattctgtga acctgggggt aatgaggaca
 300
 aagaacttg aacagcccgg aacctcggtt gatgaagccg cggccgggnt tgagaggacc
 360
 gactgcagtt ctgaaagacg ttctgtgtg ggttcaatgc tatcagacag catcacgccc
 420
 cacagagaaa tctttcatga aaggaagagt ccatcgctgt ggccaacttt tttgtggtca
 480
 tagtttaaga agttgcccc aacctccagca gccaccgccc caacgagtca gccgccgtcc
 540
 acattgag
 548

<210> 5216
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 5216
 Ala Gly Glu Leu Leu Gln Leu Arg Ser Ser Pro Ser Glu Asp Ser Val
 1 5 10 15
 Asn Leu Gly Val Met Arg Thr Lys Asn Leu Glu Gln Pro Gly Thr Ser
 20 25 30
 Val Asp Glu Ala Ala Ala Gly Xaa Glu Arg Thr Asp Cys Ser Ser Glu
 35 40 45
 Arg Arg Ser Ala Val Gly Ser Met Leu Ser Asp Ser Ile Thr Pro His
 50 55 60
 Arg Glu Ile Phe His Glu Arg Lys Ser Pro Ser Leu Trp Pro Thr Phe
 65 70 75 80
 Leu Trp Ser

<210> 5217
 <211> 4189
 <212> DNA
 <213> Homo sapiens

<400> 5217

atcagtaaaa tggggagaaa ttccaagcac acttctcaga gcagagcaga agaggttgac
60
tatggagagg agaatgaaga tgggaccaca ggtgagcccc gggtgcccac ttactgcage
120
ccccactggc gcaggtgcc ccaggccctg tgcagacaca ccaggccctc agccgcagcc
180
catggacctg cgggtgccag cggcccccag tggagcccc accagagccc acattgctgg
240
ccctgcagcg tccccagcgc ctgcaccacc acctcttct agcaggcctg cagcagcagc
300
gctcgggtgga gcccagagg ctctccatgg acacgccgat gcccagttg caggtgggac
360
cccaggaaca acagctgcgg cagcttctcc acaaggacaa gagcaagcga agtgctgtag
420
ccagcagcgt ggtcaagcag aagctagcgg aggtgattct gaaaaaacag caggcggccc
480
tagaaagaac agtccatccc aacagccccg gcattcccta cagaaccctg gagccccctg
540
agacggaagg agccaccgc tccatgctca gcagcttttt gctcctgtt cccagcctgc
600
ccagtgacct cccagagcac ttccctctgc gcaagacagt ctctgagccc aacctgaagc
660
tgcgctataa gcccagaag tccctggagc ggaggaagaa tccactgctc cgaaaggaga
720
gtgcgcccc cagcctccgg cggcggcccc cagagaccct cggagactcc tccccagta
780
gtagcagcac gcccgcata ggatgcagct ccccaatga cagcgagcac ggccccaatc
840
ccatcctggg ctccggaggc ctcttgggccc agcggctgcg gctgcaggag acttctgtgg
900
ccccgttcgc ctgcccga gtgtccttgc tgcccgaat cactctgggg ctgcccggcc
960
ctgccagggc tgacagtgc cgcaggacct atccgactct gggccctcgg gggccaatcc
1020
tggggagccc ccacactccc ctcttctgc cccatggctt ggagcccgag gctgggggca
1080
ccttgccctc tcgcctgcag ccattctcc tccctggacct ctcaggtct catgcccgc
1140
tgctgactgt gcccgggctt gggcccttgc ccttcactt tgcccagtcc ttaatgacca
1200
ccgagcggct ctctgggtca ggcctccact ggccactgag ccgactcgc tcagagcccc
1260
tgccccccag tgccaccgct ccccccaccgc cgggccccat gcagccccgc ctggagcagc
1320
tcaaaactca cgtccagggt atcaagaggt cagccaagcc gagtgagaag ccccggtgc
1380
ggcagatacc ctccgctgaa gacctggaga cagatggcgg gggaccgggc caggtgggtg
1440
acgatggcct ggagcacagg gagctgggccc atgggcagcc tgaggccaga ggccccgctc
1500
ctctccagca gcacctcag gtgttgctct gggaacagca gcgactggct gggcggctcc
1560
cccggggcag caccggggac actgtgctgc ttctctggc ccagggtggg caccggcctc
1620

tgtcccgggc tcagtcttcc ccagccgcac ctgcctcact gtcagcccca gagcctgcc
1680
gcnaggccc gagtcctctc cagctcagag acccctgcc ggaccctgcc cttcaccaca
1740
gggctgatct atgactcggg catgctgaag caccagtgtc cctgcggtga caacagcagg
1800
caccgggagc acgccggccg catccagagc atctgggtccc ggctgcagga gcgggggctc
1860
cggagccagt gtgagtgtct ccgaggccgg aaggcctccc tggaagagct gcagtcggtc
1920
cactctgagc ggcacgtgct cctctacggc accaaccgc tcagccgcct caaactggac
1980
aacgggaagc tggcagggct cctggcacag cggatgtttg tgatgctgcc ctgtgggtgg
2040
gttgggggtg acactgacac catctggaat gagcttcatt cctccaatgc agcccgtgg
2100
gccgtggca gtgtcactga cctcgcttc aaagtggctt ctcgtgagct aaagaatgt
2160
ttcgtgtgg tggggccccc aggacacat gcagatcatt caacagccat gggcttctgc
2220
ttcttcaact cagtggccat cgctgcccg cagctgcaac agcagagcaa ggccagcaag
2280
atcctcattg tagactggga cgtgcacat ggcaacgcca ccagcaaac cttctacaa
2340
gacccagtg tgctctacat ctccctgcat cgccatgacg acggcaactt cttcccggg
2400
agtggggctg tggatgaggt aggggctggc agcggtgagg gcttcaatgt caatgtggc
2460
tgggctggag gtctggaccc ccccatgggg gatcctgagt acctggctgc tttcaggata
2520
gtcgtgatgc ccatgcccc agagtctctt ccagacctag tcttgggtgc tgctggattt
2580
gatgctgctg agggtcaccc ggccccactg ggtggctacc atgtttctgc caaatgtttt
2640
ggatacatga cgcagcaact gatgaacctg gcaggaggcg cagtgggtgct ggccttggag
2700
ggtggccatg acctcacagc catctgtgac gcctctgagg cctgtgtggc tgctcttctg
2760
ggtaacaggg tggatccctt ttcagaagaa ggctggaaac agaaaccaa cctcaatgcc
2820
atccgctctc tggaggccgt gatccgggtg cacagtaaact actggggctg catgcagcg
2880
ctggcctcct gtccagactc ctgggtgcct agagtgccag gggctgacaa agaagaagt
2940
gaggcagtga ccgcactggc gtccctctct gtgggcatcc tggctgaaga taggcctcg
3000
gagcagctgg tggaggagga agaactatg aatctctaag gctctggaac catctgccc
3060
cccacatgc ccttgggacc tggttctctt ctaaccctg gcaatagccc ccattcctgg
3120
gtcttttagag atcctgtggg caagtagttg gaaccagaga acagcctgcc tgctttgaca
3180
gttatccag ggagcgtgag aaaatccctg ggtctagaat gggaaactgga gaggaccctg
3240

agaggagacg ggctgggcgg cgacccccac agggctctcg agaacagatt ctcccccca
 3300
 gtatgggccc tggctgtggc cccattcct caggactgca cagaggagga ctggctccgg
 3360
 ctccgtcggg ctcaccctta accactattc ctggctctgc aaaccccaga ctttgacac
 3420
 agccccaggc tccacacaga aatgtgaact tggcctcaga caggctggcc cttcctaggc
 3480
 tctaggggct aggggggagt ggggagccaa gaggtcccat attcctgagt gcaggggtag
 3540
 tccctctcac ctgcttcctc agacgactct ggaagcttcc ctctaccacc gggcactgag
 3600
 acgaagctcc ctgacagccg agactggcag ccctccatct ggtccgtacc ctgccagag
 3660
 gccccctac atcaacctcc tggcgatgcc ctgggtggagc agatgggtgc tctgggagtc
 3720
 ctgtgcttcc tgatccaatg gtgccaaacc cttcatctcc cccagaagcg cagcataccc
 3780
 ctgggacccc tcggccactg cccactcggg gagccttctc tgtttctggg gcctccccc
 3840
 ccatagctct gattcccacc ccacatagga atagcctgac tgagggggaa ggggtgggag
 3900
 agaagataca gacatggagg aggggaggct gctctggcaa agtcttcaag gcttttggg
 3960
 gtccaggcct ggggtcaaga aggaaaatgt gtgtgagcat gtgtgtgagt gaggcgtgtg
 4020
 tgtgagcgtg tgtgtgagtg aggcgtgtgt gtgtgtcttt cctaggaccc accataccct
 4080
 gtgtatgtat gcatgttttt gtaaaaagga agaaaatgga aaaaaatctg aacaataaat
 4140
 gttttatttg ctttaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 4189

<210> 5218

<211> 541

<212> PRT

<213> Homo sapiens

<400> 5218

Met	Ala	Gly	Asp	Arg	Ala	Arg	Trp	Trp	Thr	Met	Ala	Trp	Ser	Thr	Gly
1			5					10					15		
Ser	Trp	Ala	Met	Gly	Ser	Leu	Arg	Pro	Glu	Ala	Pro	Leu	Leu	Ser	Ser
		20						25				30			
Ser	Thr	Leu	Arg	Cys	Cys	Ser	Gly	Asn	Ser	Ser	Asp	Trp	Leu	Gly	Gly
		35					40					45			
Ser	Pro	Gly	Ala	Ala	Pro	Gly	Thr	Leu	Cys	Cys	Phe	Leu	Trp	Pro	Arg
		50				55					60				
Val	Gly	Thr	Gly	Leu	Cys	Pro	Gly	Leu	Ser	Leu	Pro	Gln	Pro	His	Leu
65				70						75				80	
Pro	His	Cys	Gln	Pro	Gln	Ser	Leu	Pro	Ala	Xaa	Ala	Arg	Val	Leu	Ser
			85					90					95		
Ser	Ser	Glu	Thr	Pro	Ala	Arg	Thr	Leu	Pro	Phe	Thr	Thr	Gly	Leu	Ile
		100						105					110		
Tyr	Asp	Ser	Val	Met	Leu	Lys	His	Gln	Cys	Ser	Cys	Gly	Asp	Asn	Ser

	115						120					125				
Arg	His	Pro	Glu	His	Ala	Gly	Arg	Ile	Gln	Ser	Ile	Trp	Ser	Arg	Leu	
	130					135					140					
Gln	Glu	Arg	Gly	Leu	Arg	Ser	Gln	Cys	Glu	Cys	Leu	Arg	Gly	Arg	Lys	
145					150					155					160	
Ala	Ser	Leu	Glu	Glu	Leu	Gln	Ser	Val	His	Ser	Glu	Arg	His	Val	Leu	
				165					170					175		
Leu	Tyr	Gly	Thr	Asn	Pro	Leu	Ser	Arg	Leu	Lys	Leu	Asp	Asn	Gly	Lys	
			180					185					190			
Leu	Ala	Gly	Leu	Leu	Ala	Gln	Arg	Met	Phe	Val	Met	Leu	Pro	Cys	Gly	
	195						200					205				
Gly	Val	Gly	Val	Asp	Thr	Asp	Thr	Ile	Trp	Asn	Glu	Leu	His	Ser	Ser	
	210					215					220					
Asn	Ala	Ala	Arg	Trp	Ala	Ala	Gly	Ser	Val	Thr	Asp	Leu	Ala	Phe	Lys	
225					230					235					240	
Val	Ala	Ser	Arg	Glu	Leu	Lys	Asn	Gly	Phe	Ala	Val	Val	Arg	Pro	Pro	
				245					250					255		
Gly	His	His	Ala	Asp	His	Ser	Thr	Ala	Met	Gly	Phe	Cys	Phe	Phe	Asn	
			260					265					270			
Ser	Val	Ala	Ile	Ala	Cys	Arg	Gln	Leu	Gln	Gln	Gln	Ser	Lys	Ala	Ser	
	275						280					285				
Lys	Ile	Leu	Ile	Val	Asp	Trp	Asp	Val	His	His	Gly	Asn	Ala	Thr	Gln	
	290				295						300					
Gln	Thr	Phe	Tyr	Gln	Asp	Pro	Ser	Val	Leu	Tyr	Ile	Ser	Leu	His	Arg	
305					310					315					320	
His	Asp	Asp	Gly	Asn	Phe	Phe	Pro	Gly	Ser	Gly	Ala	Val	Asp	Glu	Val	
				325					330					335		
Gly	Ala	Gly	Ser	Gly	Glu	Gly	Phe	Asn	Val	Asn	Val	Ala	Trp	Ala	Gly	
			340					345					350			
Gly	Leu	Asp	Pro	Pro	Met	Gly	Asp	Pro	Glu	Tyr	Leu	Ala	Ala	Phe	Arg	
	355						360					365				
Ile	Val	Val	Met	Pro	Ile	Ala	Arg	Glu	Phe	Ser	Pro	Asp	Leu	Val	Leu	
	370				375						380					
Val	Ser	Ala	Gly	Phe	Asp	Ala	Ala	Glu	Gly	His	Pro	Ala	Pro	Leu	Gly	
385					390					395					400	
Gly	Tyr	His	Val	Ser	Ala	Lys	Cys	Phe	Gly	Tyr	Met	Thr	Gln	Gln	Leu	
				405					410					415		
Met	Asn	Leu	Ala	Gly	Gly	Ala	Val	Val	Leu	Ala	Leu	Glu	Gly	Gly	His	
			420					425					430			
Asp	Leu	Thr	Ala	Ile	Cys	Asp	Ala	Ser	Glu	Ala	Cys	Val	Ala	Ala	Leu	
	435						440					445				
Leu	Gly	Asn	Arg	Val	Asp	Pro	Leu	Ser	Glu	Glu	Gly	Trp	L			

<210> 5219
<211> 1212
<212> DNA
<213> Homo sapiens

<400> 5219
nnagagactt tcgcttccgg ctgccgcacg cttcgctggt gcaggtaagc tccgcacact
60
ctcggccggg cccgagtcgg actccctcaa gggtgacgag agctctgccc tttaaccgga
120
aacgtctccc tgctcacccc acccccgagc agacgcagtg ctgagcacac agctaccgga
180
caaagagtga cggccggagc tggagttatg gcggctacgg agccgatctt ggccggccact
240
gggagtcggc cggcggtgac accggagaaa ctggaaggag ccggttcgag ctacgcccct
300
gagcgtaact gtgtgggctc ctcgctgcca gaggcctcac gcctgcccc tgagccttcc
360
agtcccaacg ccgcggtccc tgaagccatc cctacgcccc gagctgaggc ctccgaggcc
420
ctggagctgc ctctcggggc cgcacccgtg agcgtagcgc ctcaggccga agctgaagcg
480
cgctccacac caggccccgc cggctctaga ctcggtcccg agacgttccg ccagcgtttc
540
cggcagttcc gctaccagga tgcggcgggt ccccgaggag ctttcgggca gctgagggag
600
ctgtcccgcc agtggctgag gcctgacatc cgcaccaagg agcagatcgt ggagatgctg
660
gtgcaagagc agctgctcgc catcctgccc gaggcggctc gggccccggg gatccgccc
720
cgcacggatg tgcgcacac tggctgagcg gtggagctgc gggcgggccag ggccggggcg
780
tctgtgcgga ctggggccat gatcggggcc gggggcctga gcctgggacc ccaccccg
840
ttaatgaaaa atgagttttg gcagcgcctg tggctctggtg tgtctctttc attcgttctt
900
attgggttta ttttaccag cctgtttcct accgcctttc tggctggtgg cgaaacgaag
960
ttgggagtcg gtaacaataa ggccttcggt ggctatagtg ggatctttag atgttgactg
1020
aacctagggt atccctctac cacacatggg aagtttttca cctgggctcc caaggaccca
1080
cttgggtttc ttacacgcaa aatagctggc tctattaaat gctcacttaa ctggctacct
1140
ctataccaat atgggcacca acttgacact gccctttggg tacaggcttc ccacaatgtc
1200
cnagttactg gg
1212

<210> 5220
<211> 179
<212> PRT
<213> Homo sapiens

<400> 5220

```

Met Ala Ala Thr Glu Pro Ile Leu Ala Ala Thr Gly Ser Pro Ala Ala
 1           5           10           15
Val Pro Pro Glu Lys Leu Glu Gly Ala Gly Ser Ser Ser Ala Pro Glu
          20           25           30
Arg Asn Cys Val Gly Ser Ser Leu Pro Glu Ala Ser Pro Pro Ala Pro
          35           40           45
Glu Pro Ser Ser Pro Asn Ala Ala Val Pro Glu Ala Ile Pro Thr Pro
          50           55           60
Arg Ala Ala Ala Ser Ala Ala Leu Glu Leu Pro Leu Gly Pro Ala Pro
65           70           75           80
Val Ser Val Ala Pro Gln Ala Glu Ala Glu Ala Arg Ser Thr Pro Gly
          85           90           95
Pro Ala Gly Ser Arg Leu Gly Pro Glu Thr Phe Arg Gln Arg Phe Arg
          100          105          110
Gln Phe Arg Tyr Gln Asp Ala Ala Gly Pro Arg Glu Ala Phe Arg Gln
          115          120          125
Leu Arg Glu Leu Ser Arg Gln Trp Leu Arg Pro Asp Ile Arg Thr Lys
          130          135          140
Glu Gln Ile Val Glu Met Leu Val Gln Glu Gln Leu Leu Ala Ile Leu
145          150          155          160
Pro Glu Ala Ala Arg Ala Arg Arg Ile Arg Arg Arg Thr Asp Val Arg
          165          170          175
Ile Thr Gly

```

<210> 5221

<211> 497

<212> DNA

<213> Homo sapiens

<400> 5221

```

ntccggaccc tccaagtgga gaccctgggtg gagccccag aaccatgtgc cgagcccgct
60
gcttttggag acacgcttca catacactac acgggaagct tggtagatgg acgtattatt
120
gacacctccc tgaccagaga ccctctgggtt atagaacttg gccaaaagca ggtgattcca
180
ggtctggagc agagtcttct cgacatgtgt gtgggagaga agcgaagggc aatcattcct
240
tctcacttgg cctatggaaa acggggattt ccaccatctg tcccagggaac taaagacaac
300
ctgatgaggc cacctggcat gacctccagc agccagtaac ttgttaggga agagacctgc
360
ttgggccaca tgggtctgct gcctgtgccca ccacctttcc cagaacactg gacttcttcc
420
ctgccctttt ctacaactct acgctgtgtc agctgtacag ccacccccca ccccttcctt
480
tcagccacca tctgtcc
497

```

<210> 5222

<211> 112

<212> PRT

<213> Homo sapiens

<400> 5222

```

Xaa Arg Thr Leu Gln Val Glu Thr Leu Val Glu Pro Pro Glu Pro Cys
 1           5           10           15
Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu His Ile His Tyr Thr Gly
          20           25           30
Ser Leu Val Asp Gly Arg Ile Ile Asp Thr Ser Leu Thr Arg Asp Pro
          35           40           45
Leu Val Ile Glu Leu Gly Gln Lys Gln Val Ile Pro Gly Leu Glu Gln
          50           55           60
Ser Leu Leu Asp Met Cys Val Gly Glu Lys Arg Arg Ala Ile Ile Pro
65           70           75           80
Ser His Leu Ala Tyr Gly Lys Arg Gly Phe Pro Pro Ser Val Pro Gly
          85           90           95
Thr Lys Asp Asn Leu Met Arg Pro Pro Gly Met Thr Ser Ser Ser Gln
          100           105           110

```

<210> 5223

<211> 637

<212> DNA

<213> Homo sapiens

<400> 5223

```

ngcaccattt tcgacaatga agccaaagac gtggagagag aagtttgctt tattgatatt
60
gcctgcatg aaattccaga gcgctactac aaagaatctg aggatcctaa gcacttcaag
120
tcagagaaga caggacgggg acagttgagg gaaggctgga gagatagtca tcagcctatc
180
atgtgtcctt acaagctggt gactgtgaag tttgaggtct gggggcttca gaccagagtg
240
gaacaatttg tacacaaggt ggtccgagac attctgctga ttggacatag acaggctttt
300
gcatggggtg atgagtggta tgatatgaca atggatgatg ttcgggaata cgagaaaaac
360
atgcatgaac aaaccaacat aaaagtttgc aatcagcatt cctcccctgt ggatgacata
420
gagagtcatg cccaaacaag tacatgacaa tggatgaagt ccgagaattt gaacgagcca
480
ctcaggaagc caccaacaag aaaatcggca ttttcccacc tgcaatttct atctccagca
540
tccccctgct gccttcttcc gtccgcagtg cgcttcttag tgctccatcc acccctctct
600
ccacagacgc acccgaattt ctgtccgttc ccaaaga
637

```

<210> 5224

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5224

```

Xaa Thr Ile Phe Asp Asn Glu Ala Lys Asp Val Glu Arg Glu Val Cys

```



```

      1           5           10           15
Phe Ile Asp Ile Ala Cys Asp Glu Ile Pro Glu Arg Tyr Tyr Lys Glu
      20           25           30
Ser Glu Asp Pro Lys His Phe Lys Ser Glu Lys Thr Gly Arg Gly Gln
      35           40           45
Leu Arg Glu Gly Trp Arg Asp Ser His Gln Pro Ile Met Cys Ser Tyr
      50           55           60
Lys Leu Val Thr Val Lys Phe Glu Val Trp Gly Leu Gln Thr Arg Val
      65           70           75           80
Glu Gln Phe Val His Lys Val Val Arg Asp Ile Leu Leu Ile Gly His
      85           90           95
Arg Gln Ala Phe Ala Trp Val Asp Glu Trp Tyr Asp Met Thr Met Asp
      100          105          110
Asp Val Arg Glu Tyr Glu Lys Asn Met His Glu Gln Thr Asn Ile Lys
      115          120          125
Val Cys Asn Gln His Ser Ser Pro Val Asp Asp Ile Glu Ser His Ala
      130          135          140
Gln Thr Ser Thr
145

```

<210> 5225

<211> 394

<212> DNA

<213> Homo sapiens

<400> 5225

```

acgcgtgaag gggctggggt gggcaatcag ggaggacttc ctggaggcgg cagctgaggc
60
tggggcagag aaggaccag ggcactggaa ggggaaggag aaacgtaagc agagtcttgg
120
caggcctggt cagacggaca tgcccaaggg aacagatagt accaggacag gggaccctgg
180
tctgaagggg cgatagcctg gccccagtg gaaacagccc ctccaaccc tggcggcaga
240
cagggagggt cggcaggtat gtgagatgca aacctggggg actgcccac cccagtgga
300
tgtgaggaca cggctgggttc aggaagtgga gtgacaaatg ggctgtgctg gacttgcttt
360
ccccacatga aggttaggaa ccaagagaac ggcc
394

```

<210> 5226

<211> 113

<212> PRT

<213> Homo sapiens

<400> 5226

```

Met Trp Gly Lys Gln Val Gln His Ser Pro Phe Val Thr Pro Leu Pro
      1           5           10           15
Glu Pro Thr Val Ser Ser His Pro Leu Gly Asp Gly Gln Ser Pro Arg
      20           25           30
Phe Ala Ser His Ile Pro Ala Asp Pro Pro Cys Leu Pro Pro Gly Leu
      35           40           45
Gly Gly Ala Val Ser Thr Gly Gly Gln Ala Ile Ala Pro Ser Asp Gln

```

```

<400> 5227
tcgcgaacag gccacccagg cacacgtgga tgttctttag ctccttggcg ccaccagatg
60
cagctgccag tgagatgttc tgcagctgtt tgatcctctc gctgaagtcg gacacccact
120
ggatgacggg catgccggca ggcaccgtgt agaaggccag tgtggtaacc ttacctgtct
180
acctgaactt caccctgca gacctcatct tcaccgtgga cttcgaaatt gctacaaagg
240
aggatcctcg cagcttctac gagcgggggtg tcgcagtctt gtgcacagag taaacttttc
300
tagctgcccc tttctgtaat agtgaaagtt ggtatttaac atttattcat ttttaaaata
360
tttgggaagg ctgagcttgt gaaaagaaaag tggttgggtct gaggttggag gaagctgaat
420
ggaatctgac ggttgggagt ggtggaaatt ggaaggatac caggaggtat ttgggaaaaac
480
cttacggagc tgccctcgtc tactggagca gaagaaatag acctaatctt cctcaaggga
540
attatggaga atcctattgt aaaatcactt gctaaggctc gtgagaggct agaagattcc
600
aaactagaag ctgtcagtga caataacttg gaattagtca atgaaattct tgaagacatc
660
actcctctaa taaatgtgga tgaaaatgtg gcagaattgg ttggtatact caaagaacct
720
cacttccagt cactgttgga ggcccatgat atttgggcat caaagtgtta tgattcacct
780
ccatcaagcc cagaaatgaa taattcttct atcaataatc agttattacc agtagatgcc
840
attcgtaatt ttggtattca caaaagagct ggggaaccac tgggtgtgac atttaggggt
900
gaaaataatg atctggtaat tgcccgaatc ctccatgggg gaatgataga tcgacaaggt
960
ctacttcatt tgggagatat aattaaagaa gtcaatggcc atgaggttgg aaataatcca
1020
aaggaattac aagaattact gaaaaatatt agtggaagtg tcaccctaaa aatcttacca
1080
agttatagag ataccattac tctcaacag gtatttgtga agtgtcattt tgattataat
1140

```

ccatacaatg acaacctaat accttgcaaa gaagcaggat tgaagttttc caaaggagag
 1200
 attcttcaga ttgtaaatag agaagatcca aattggtggc aggctagcca tgtaaaagag
 1260
 ggaggaagcg ctggtctcat tccaagccag ttcttggaag agaagagaaa ggcatttgtt
 1320
 agaagagact gggacaattc aggacctttt tgtggaacta taagtagcaa aaaaaagaaa
 1380
 aagatgatgt atctcacaac cagaaatgca gaatttgatc gtcattgaaat ccagatatat
 1440
 gaggaggtag ccaaaatgcc tcccttccag agaaaaacat tagtattgat aggagctcaa
 1500
 ggtgtaggcc gaagaagctt gaaaaacagg ttcattagat tgaatccac tagatttggg
 1560
 actacggtgc catttacttc acggaaacca agggaagatg aaaaagatgg ccaggcatat
 1620
 aagtttgtgt cacgatctga gatggaagca gatattaaag ctggaaagta tttggaacat
 1680
 ggggaatatg aaggaaatct ctatggaacc aaaattgatt ctattcttga ggttgtccaa
 1740
 actggacgga cttgcattct ggatgtcaac ccacaagcac tgaaagtatt gaggacatca
 1800
 gagtttatgc cctatgtggt atttattgcg gctccggagc tagagacgtt acgtgccatg
 1860
 cacaaggctg tgggtggatgc aggaatcact accaagcttc tgaccgactc tgacttgaag
 1920
 aaaacagtgg atgaaagtgc acggattcag agagcataca accactatct tgatttgatc
 1980
 atcataaatg ataatctaga caaagccttt gaaaaactgc aaactgccat agagaaactg
 2040
 agaatggaac cacagtgggt cccaatcagc tgggtttact gatgattcag taaggttaac
 2100
 aatgaaaatt aaactcttaa aaagtgaact caacaaataa accttctact gagaaaatac
 2160
 atcacagata gaagattatc tgctaagtcc aggcattttt atggtgtaga ttgaaataat
 2220
 agtacacttc tgaattttta tataaaatgt ggttggaagg tgtactaata tataatttat
 2280
 cttaattttt ctaactttgt atggataatc tttctattca tatcacataa agaaatgcgt
 2340
 tgaagcaaaa aaaaaaaaaa aaaaaa
 2366

<210> 5228

<211> 550

<212> PRT

<213> Homo sapiens

<400> 5228

Arg	Leu	Gly	Val	Val	Glu	Ile	Gly	Arg	Ile	Pro	Gly	Gly	Ile	Trp	Glu
1				5				10					15		
Asn	Leu	Thr	Glu	Leu	Pro	Ser	Ser	Thr	Gly	Ala	Glu	Glu	Ile	Asp	Leu
			20					25					30		
Ile	Phe	Leu	Lys	Gly	Ile	Met	Glu	Asn	Pro	Ile	Val	Lys	Ser	Leu	Ala

35 40 45
 Lys Ala Arg Glu Arg Leu Glu Asp Ser Lys Leu Glu Ala Val Ser Asp
 50 55 60
 Asn Asn Leu Glu Leu Val Asn Glu Ile Leu Glu Asp Ile Thr Pro Leu
 65 70 75 80
 Ile Asn Val Asp Glu Asn Val Ala Glu Leu Val Gly Ile Leu Lys Glu
 85 90 95
 Pro His Phe Gln Ser Leu Leu Glu Ala His Asp Ile Val Ala Ser Lys
 100 105 110
 Cys Tyr Asp Ser Pro Pro Ser Ser Pro Glu Met Asn Asn Ser Ser Ile
 115 120 125
 Asn Asn Gln Leu Leu Pro Val Asp Ala Ile Arg Ile Leu Gly Ile His
 130 135 140
 Lys Arg Ala Gly Glu Pro Leu Gly Val Thr Phe Arg Val Glu Asn Asn
 145 150 155 160
 Asp Leu Val Ile Ala Arg Ile Leu His Gly Gly Met Ile Asp Arg Gln
 165 170 175
 Gly Leu Leu His Val Gly Asp Ile Ile Lys Glu Val Asn Gly His Glu
 180 185 190
 Val Gly Asn Asn Pro Lys Glu Leu Gln Glu Leu Leu Lys Asn Ile Ser
 195 200 205
 Gly Ser Val Thr Leu Lys Ile Leu Pro Ser Tyr Arg Asp Thr Ile Thr
 210 215 220
 Pro Gln Gln Val Phe Val Lys Cys His Phe Asp Tyr Asn Pro Tyr Asn
 225 230 235 240
 Asp Asn Leu Ile Pro Cys Lys Glu Ala Gly Leu Lys Phe Ser Lys Gly
 245 250 255
 Glu Ile Leu Gln Ile Val Asn Arg Glu Asp Pro Asn Trp Trp Gln Ala
 260 265 270
 Ser His Val Lys Glu Gly Gly Ser Ala Gly Leu Ile Pro Ser Gln Phe
 275 280 285
 Leu Glu Glu Lys Arg Lys Ala Phe Val Arg Arg Asp Trp Asp Asn Ser
 290 295 300
 Gly Pro Phe Cys Gly Thr Ile Ser Ser Lys Lys Lys Lys Lys Met Met
 305 310 315 320
 Tyr Leu Thr Thr Arg Asn Ala Glu Phe Asp Arg His Glu Ile Gln Ile
 325 330 335
 Tyr Glu Glu Val Ala Lys Met Pro Pro Phe Gln Arg Lys Thr Leu Val
 340 345 350
 Leu Ile Gly Ala Gln Gly Val Gly Arg Arg Ser Leu Lys Asn Arg Phe
 355 360 365
 Ile Val Leu Asn Pro Thr Arg Phe Gly Thr Thr Val Pro Phe Thr Ser
 370 375 380
 Arg Lys Pro Arg Glu Asp Glu Lys Asp Gly Gln Ala Tyr Lys Phe Val
 385 390 395 400
 Ser Arg Ser Glu Met Glu Ala Asp Ile Lys Ala Gly Lys Tyr Leu Glu
 405 410 415
 His Gly Glu Tyr Glu Gly Asn Leu Tyr Gly Thr Lys Ile Asp Ser Ile
 420 425 430
 Leu Glu Val Val Gln Thr Gly Arg Thr Cys Ile Leu Asp Val Asn Pro
 435 440 445
 Gln Ala Leu Lys Val Leu Arg Thr Ser Glu Phe Met Pro Tyr Val Val
 450 455 460
 Phe Ile Ala Ala Pro Glu Leu Glu Thr Leu Arg Ala Met His Lys Ala

465		470		475		480									
Val	Val	Asp	Ala	Gly	Ile	Thr	Thr	Lys	Leu	Leu	Thr	Asp	Ser	Asp	Leu
			485						490					495	
Lys	Lys	Thr	Val	Asp	Glu	Ser	Ala	Arg	Ile	Gln	Arg	Ala	Tyr	Asn	His
		500						505					510		
Tyr	Phe	Asp	Leu	Ile	Ile	Ile	Asn	Asp	Asn	Leu	Asp	Lys	Ala	Phe	Glu
		515				520					525				
Lys	Leu	Gln	Thr	Ala	Ile	Glu	Lys	Leu	Arg	Met	Glu	Pro	Gln	Trp	Val
	530					535					540				
Pro	Ile	Ser	Trp	Val	Tyr										
545				550											

<210> 5229

<211> 1031

<212> DNA

<213> Homo sapiens

<400> 5229

```

acgcgtgtgc tgtggttaca tccgtggaac agacagacag cagctgcccc tgcaaattgc
60
agcgccagcc cagtcaaaag agcttgaac ctaccaagcc ggaggactgt gctgtgcctc
120
tctcgccac attttcccca agcactctca ggaacctggc aacagtgtcc ccttgtggcc
180
aagcctggaa catcacatct gtacgttgca atctgtggat cagctacgag actgagagaa
240
aggaatgaaa ggatggaaga attacaagat caggcactgc tgtctgtctg ttccacggat
300
gtaaccacag cacacgcgtg gctcacggta ctagtgtgat aaatgcttgt tacatgaagg
360
cgtgaacagg gatgagaaga gacttctctg agaaacaaaa ggactaacia tcaggaaggg
420
gaggtgatcg gggcaggagt aaagtggaca cctcagcaaa gccattcgct gtgatctctg
480
attgtgcagt gtcatgtcct gtcaccagag cccctcgtg tttgatgttg gccaatgccg
540
ccagcatgat ctacgaggcc aaatcctaata ctaccattct ctgacaccag ctgggtccct
600
ggggtcgtcc acccgatgtc cccattctc cccacttggc ctccccaca ggctctcggc
660
aaaggaccgt gggaggcacc tgtgacactg cccctttcct gtgcagctgt tttcttctt
720
cattcttttc actcctcggt actctttttt ttttactct cagccacac aaaactagga
780
actttgttat tctacttatt tttctgtact ctgtctgttt gcacacagat ggatatctga
840
gagccagcga actttcttta cctcctagta tcatttcatg aaaattagta gcacctgcac
900
aatggggcct tggagacagg aataaaagga aaaatctgga atggaatcac atgacgcaac
960
aggctatgaa gactccctgc ccggctgcta tatgtctggt aaacagaata aatagtactt
1020
gagcatccct g
1031

```

<210> 5230
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 5230
 Met Ile Leu Gly Gly Lys Glu Ser Ser Leu Ala Leu Arg Tyr Pro Ser
 1 5 10 15
 Val Cys Lys Gln Thr Glu Tyr Arg Lys Ile Ser Arg Ile Thr Lys Phe
 20 25 30
 Leu Val Leu Cys Gly Leu Arg Val Lys Lys Lys Arg Val Thr Arg Ser
 35 40 45
 Glu Lys Asn Glu Glu Glu Lys Gln Leu His Arg Lys Arg Ala Val Ser
 50 55 60
 Gln Val Pro Pro Thr Val Leu Cys Arg Glu Pro Val Gly Glu Ala Lys
 65 70 75 80
 Trp Gly Glu Trp Gly Thr Ser Gly Gly Arg Pro Gln Gly Thr Ser Trp
 85 90 95
 Cys Gln Arg Met Val Asp
 100

<210> 5231
 <211> 845
 <212> DNA
 <213> Homo sapiens

<400> 5231
 tccggatctt ggagggtaca gagggcgccc ctccggcctcc tccctttcgg aggtggggac
 60
 aaggtggagg aagggtgca ggaggaggag ctctagcatc gcgacccgcc ccgtcccgtc
 120
 cagtctggcc tgggcgccc gcggaacgctg tcctggctgc cgccaccga acagcctgtc
 180
 ctgggtgcccc ggctccctgc cccgcgccc gtcatgaccc tgcgcccctc actcctcccg
 240
 ctccatctgc tgctgctgct gctgctcagt gcggcggtgt gccgggctga ggctgggctc
 300
 gaaaccgaaa gtcccgtccg gaccctccaa gtggagaccc tgggtggagcc cccagaacca
 360
 tgtgccgagc ccgctgcttt tggagacacg cttcacatac actacacggg aagcttggtg
 420
 gatggacgta ttattgacac ctccctgacc agagaccctc tggttataga acttggccaa
 480
 aagcaggtga ttccaggtct ggagcagagt cttctcgaca tgtgtgtggg agagaagcga
 540
 agggcaatca ttccttctca cttggcctat ggaaaacggg gatttccacc atctgtccca
 600
 gcgggatgcag tgggtgcagta tgacgtggag ctgattgcac taatccgagc caactactgg
 660
 ctaaagctgg tgaagggcat tttgcctctg gtagggatgg ccatgggtgc agccctcctg
 720
 gccctcattg ggtatcacct atacagaaag gccaatagac ccaaagtctc caaaaagaag
 780

ctcaaggaag agaaacgaaa caagagcaaa aagaaataat aaataataaa ttttaaaaaa
 840
 cttaa
 845

<210> 5232
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 5232
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu Thr Glu
 20 25 30
 Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu Pro Pro Glu
 35 40 45
 Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu His Ile His Tyr
 50 55 60
 Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp Thr Ser Leu Thr Arg
 65 70 75 80
 Asp Pro Leu Val Ile Glu Leu Gly Gln Lys Gln Val Ile Pro Gly Leu
 85 90 95
 Glu Gln Ser Leu Leu Asp Met Cys Val Gly Glu Lys Arg Arg Ala Ile
 100 105 110
 Ile Pro Ser His Leu Ala Tyr Gly Lys Arg Gly Phe Pro Pro Ser Val
 115 120 125
 Pro Ala Asp Ala Val Val Gln Tyr Asp Val Glu Leu Ile Ala Leu Ile
 130 135 140
 Arg Ala Asn Tyr Trp Leu Lys Leu Val Lys Gly Ile Leu Pro Leu Val
 145 150 155 160
 Gly Met Ala Met Val Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu
 165 170 175
 Tyr Arg Lys Ala Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu
 180 185 190
 Glu Lys Arg Asn Lys Ser Lys Lys Lys
 195 200

<210> 5233
 <211> 2801
 <212> DNA
 <213> Homo sapiens

<400> 5233
 agatctcaat tcacacatga ctacctttga gctaattgact gtctccagaa aataactgtg
 60
 cccaagaag tgctccagat ttgcaaggaa tagccccaag agaataccaa gacaagcagg
 120
 ctgttccctg gaaaaaatct aatgcaagga gggctagtgc acagcaaatt cactgcctcc
 180
 tcccatgcac gtggtagaga gtaccagtat caacatggcc ctgttttctg ctaaaaccag
 240
 attttgagga atcagagacc cccaacacta ctactcagt agctagcagc cccttccttt
 300

caactgggag tggtattaga atgaaaagta attagttaga agggcataca tctcagtggc
360
atgagcattg tggaatatcc ttctctaggc acatttgtcc actaagggaa cagcctcaga
420
aactggtaca gcaatgggtg agatgagatc ctggagagag aacacagcca tcccctatag
480
aaaggcacag cttttgggct tctctggcct gaatgccttc tggggatattt ccatatgcaa
540
cagcccagag tcatagcctt gggcaaccac acatagaggt ttccttctca cttcagacac
600
atacatcact ttcacaccac ttggggatgg aaatacctac aagagtgaag gtcaagggcc
660
ctccccaggc atctcattca ttactcagct tccttctga ccaagtctgc caaccaatgg
720
ccagctatgc gcctcactct cattgcttct gcctccacgt aaatgaaacc aaaggcctca
780
gcatatcctg ggaggactgg gggctgttac ctaatggctc tctctgtccc attataggtg
840
caaggcacc catccacaca ttgacaccac tactccaaga tagtattttt cttttcacac
900
aatctcttta cagcagaatc cagagttggg ttgtagttta ccttcttgga aagctcatta
960
tctttgtttg aattaacatt tcagcatgga actaactggg cggaggaagg atcggtatac
1020
gtcttcagaa agttctcatt gcccagctg cctagtacta tacaagaagc tctactttga
1080
tggcagatct aagaaggcta taggcctttg tttgtaggaa gcagtgtcat tacattcaag
1140
cttcacttct ctgattggct tccaaccact gggattcaaa gagaatcaa ggttctgcct
1200
atgtctgatg acataaggaa aacttggcct cctctgctca aggttcccct ctgctcatcc
1260
ctcctcattc agacatctc caccatacca gtgttttagaa gcaaaacatg aagggttagc
1320
gccaccagga tagttagcag aaatattgtc tgtaaagcta ggcagatgag ccagaagaa
1380
tgggtcccaga gaaagcagac tggctccaat agatatcagg cagcaatccc aataaattct
1440
gacatgtcct tggcaatgga agcctgggtt ggagatcctg aggcagctgt gcctactgtt
1500
ccccacctca gaagcttctt gccagagag ccagcagcct tgggatacta atgaggatgc
1560
aactggctta ttggtatgaa atagaagggtg gctttgtagg ggcaagcagg caaagagtac
1620
tatccacatg gcaggcaggt ggctttgtgt ctggaaagct ttgcctagcc agtacagctg
1680
tgagcagagg ctggttataa atttgaactc cctcagccca tttgcaactc tgcctctgtt
1740
cccttgcatt ctgtttgggt gccctttagt ttcttagtaa atgctccttt tgaaaaactc
1800
caaccttgct ttatttaact tgggggaagg ggattctcca atgtcttttc caggataaag
1860
aaggaaatta aaataccatg aaaaaatgga catggcagta gaaaggaaac attctgatca
1920

gaccttggga aaagctggtg ccgagagagg gagaggccag gtgtccccc acccaactgg
 1980
 cactgattct cagccccttc ctcttacttc tgttggcttc aaggagacct gcccttgatg
 2040
 tgtgttgctg ctgaagcacc ctcccagcca gtgagttgga catatgcagc aggcactttg
 2100
 atgtccagga agtacactgg tacatgacag gagcaagggt caggagaggg aggggaaagg
 2160
 tttctacaat gcagatgttt tcaaaattct ccaacaatca tgactctaaa tggatgatt
 2220
 tagggctggg tgcagtgact cacacctgta atctcagcac tttgggaggc caaggcggga
 2280
 ggatcacttg ataccagaag ttcaagacca gtctggcaac gtggagagac caccatcatt
 2340
 tcaaaagaga ccccccgcc cccccggcta atttttaaaa aattagcagt acctgtagtc
 2400
 ccagctactt aggaagctga gataggagaa tcgcttgagt ccaagagctt gaggctacag
 2460
 cgagccaaga ttgcaacact gcatttcagc ctgggtgaca gagcaaggcc ctgtctctct
 2520
 aaaaaagaaa aaaaaggtat tgtttagtcc acatggccat cagtagaact acatttcata
 2580
 tgatgagaag aaaataatta tttattttac acttgagtca gggagactga caaaggatag
 2640
 gtatggaaaa tggcttgcta ttttcatggc caccctgtcc tgcaatgcgg ggggtgggag
 2700
 gggggacatt ccaatgactt actgctgcat gacaaagcac caaaacatag tggcttaaat
 2760
 agaaatatat tgtctctcat gaaaaaaaaa aaaaaaaaaa a
 2801

<210> 5234

<211> 57

<212> PRT

<213> Homo sapiens

<400> 5234

Leu	Thr	Pro	Val	Ile	Ser	Ala	Leu	Trp	Glu	Ala	Lys	Ala	Gly	Gly	Ser
1				5				10						15	
Leu	Asp	Thr	Arg	Ser	Ser	Arg	Pro	Val	Trp	Gln	Arg	Gly	Glu	Thr	Thr
		20					25					30			
Ile	Ile	Ser	Lys	Glu	Thr	Pro	Pro	Pro	Arg	Leu	Ile	Phe	Lys	Lys	
		35				40				45					
Leu	Ala	Val	Pro	Val	Val	Pro	Ala	Thr							
	50					55									

<210> 5235

<211> 3017

<212> DNA

<213> Homo sapiens

<400> 5235

nncggccggg aaagtaacca gaagcttcag gaagagatta taaagacttt ggaacacttg
 60

cccattccta ctaaaaatat gttggaggaa agcaaagtac ttccaattat tcaacgctgg
120
tctcagacta agactgctgt cctccgttg agtgaaggag atgggtattc tagtgagaat
180
acatcgctg ctcatacacc actcaacaca cctgacctt ccaccaagct gagcacagaa
240
gctgacacag acactcccaa gaaactaatg ttctgcagac tgaaaattat aagtgaatat
300
agcatggaca gtgcaatctc tgatgcaacc agtgagctag aaggcaagga tggcaaagag
360
gatcttgatc aattagaaaa tgtccctgta gaggaagagg aagaattgca gtcacaacag
420
ctactccac aacagctgcc tgaatgcaa gttgatagtg aaaccaacat agaagctagt
480
aagctaccta catctgaacc agaagctgac gctgaaatag agcccaaaga gagcaacggc
540
acaaaactag aagaacctat taatgaagaa acaccatccc aagatgaaga ggagggtgtg
600
tctgatgtgg agagtgaag gagccaagaa cagccagata aaacagtgga tataagtgt
660
ttggccacca aactcctgga cagttggaaa gacctaaagg aggtatatcg aattccaaag
720
aaaagtcaaa ctgaaaagga aaacacaaca actgaacgag gaagggatgc tgttggttc
780
agagatcaaa cacctgcccc gaagactcct aataggtcaa gagagagaga cccagacaag
840
caaaactcaaa ataaagagaa aaggaaacga agaagctccc tctcaccacc ctcttctgcc
900
tatgagcggg gaacaaaaag gccagatgac agatatgata caccaacttc taaaaagaaa
960
gtacgaatta aagaccgcaa taaactttct acagaggaac gccggaagtt gtttgagcaa
1020
gagggtggctc aacgggaggc tcagaaacaa cagcaacaga tgcagaacct gggaaatgaca
1080
tcaccaactgc cctatgactc tcttggttat aatgccccgc atcatccctt tgctgggtac
1140
ccaccagggt atcccatgca ggcctatgtg gatcccagca accctaattgc tggaaagggtg
1200
ctcctgcccc caccagcat ggaccagtg tgttctcctg ctcttatga tcatgctcag
1260
cccttggtgg gacattctac agaaccctt tctgcccctc caccagtacc agtggtgcca
1320
catgtggcag ctctgtgga agtttccagt tcccagtatg tggcccagag tgatggtgta
1380
gtacaccaag actccagcgt tgctgtcttg ccagtgccgg cccccggccc agttcaggga
1440
cagaattata gtgtttggga ttcaaacc aaagtctgtca gtgtacagca gcagtactct
1500
cctgcacagt ctcaagcaac catatattat caaggacaga catgtccaac agtctatggg
1560
gtgacatcac cttattcaca gacaactcca ccaattgtac agagttatgc ccagccaagt
1620
cttcagtata tccaggggca acagatttct acagctcatc cacaaggagt ggtggtacag
1680

ccagccgcag cagtgactac aatagttgca ccagggcagc ctcageccctt gcagccatct
 1740
 gaaatggttg tgacaaataa tctcttgat ctgccgcccc cctctcctcc caaaccaaaa
 1800
 accattgtct tacctcccaa ctggaagaca gctcgagatc cagaaggga gatttattac
 1860
 taccatgtga tcacaaggca gactcagtgg gatcctccta cttgggaaag cccaggagat
 1920
 gatgccagcc ttgagcatga agctgagatg gacctgggaa ctccaacata tgatgaaaac
 1980
 cccatgaagg cctcgaaaaa gcccaagaca gcagaagcag acacctccag tgaactagca
 2040
 aagaaaagca aagaagtatt cagaaaagag atgtcccagt tcatcgtcca gtgcctgaac
 2100
 ccttaccgga aacctgactg caaagtggga agaattacca caactgaaga ctttaaacad
 2160
 ctggctcgca agctgactca cgggtgttatg aataaggagc tgaagtactg taagaatcct
 2220
 gaggacctgg agtgcaatga gaatgtgaaa caaaaacca aggagtacat taagaagtac
 2280
 atgcagaagt ttggggctgt ttacaaaccc aaagaggaca ctgaattaga atgactgttg
 2340
 ggccagggtg ggaggatggg tggtcaggta ggacagactc tagggagagg aaatcctgtg
 2400
 ggccctttctg tcccaccctc gtcagcactg tgctactgat gatacatcac cctggggaat
 2460
 tcaaccctgc agatgtcaac tgaaggccac aaaaatgaac tccatctaca agtgattacc
 2520
 tagttgtgag ctgttggcat gtggttagaa gccatcagag gtgcaagggc ttagaaaaga
 2580
 acctggccag acctgactcc actcttaaac ctgggtcttc tccttggcgg tgctgtcagc
 2640
 gcacagaccc atgcgcatcc ccaccacaa ccctttaccc tgatgatctg tattatattt
 2700
 taatgtatat gtgaatatat tgaaaataat ttgttttttc ctgggttttg tttggttttc
 2760
 gttttgcttt tagcctctac atgctaggat cacaggaaga ctttgtaagg acagttaag
 2820
 ttctcctgca aggtttaatt tggtatcatg taaatattcc aaagcaggct gccttgtggt
 2880
 tttggccagc cttgtgctat gttgataaga ttgatttact gcttaaaatc actttacttt
 2940
 atccaatttt tactgaactt tttatgtaaa aaaataaaat caattaaaga aaaaaaaaaac
 3000
 aaaaaaaaaa aaaaaaa
 3017

<210> 5236

<211> 178

<212> PRT

<213> Homo sapiens

<400> 5236

Lys Thr Ile Val Leu Pro Pro Asn Trp Lys Thr Ala Arg Asp Pro Glu

1 5 10 15
 Gly Lys Ile Tyr Tyr Tyr His Val Ile Thr Arg Gln Thr Gln Trp Asp
 20 25 30
 Pro Pro Thr Trp Glu Ser Pro Gly Asp Asp Ala Ser Leu Glu His Glu
 35 40 45
 Ala Glu Met Asp Leu Gly Thr Pro Thr Tyr Asp Glu Asn Pro Met Lys
 50 55 60
 Ala Ser Lys Lys Pro Lys Thr Ala Glu Ala Asp Thr Ser Ser Glu Leu
 65 70 75 80
 Ala Lys Lys Ser Lys Glu Val Phe Arg Lys Glu Met Ser Gln Phe Ile
 85 90 95
 Val Gln Cys Leu Asn Pro Tyr Arg Lys Pro Asp Cys Lys Val Gly Arg
 100 105 110
 Ile Thr Thr Thr Glu Asp Phe Lys His Leu Ala Arg Lys Leu Thr His
 115 120 125
 Gly Val Met Asn Lys Glu Leu Lys Tyr Cys Lys Asn Pro Glu Asp Leu
 130 135 140
 Glu Cys Asn Glu Asn Val Lys His Lys Thr Lys Glu Tyr Ile Lys Lys
 145 150 155 160
 Tyr Met Gln Lys Phe Gly Ala Val Tyr Lys Pro Lys Glu Asp Thr Glu
 165 170 175
 Leu Glu

<210> 5237

<211> 1238

<212> DNA

<213> Homo sapiens

<400> 5237

ntagaagaca aggcgtcggt tgaataactt gcctgatttt tcttcctacc gagtagcatt
 60
 tctttttttt tcaccatata tttccctaag gcagctcctt attctgtagg aattgccaat
 120
 gttgatgtgt tattgttagg tatttatata attcacaggg ctgtcagaaa tcccgatgat
 180
 cttgaagcaa ggtctcatat gcacttggca agtgcttttg ctggcatcgg ctttggaat
 240
 gctggtgttc atctgtgcca tggaatgtct tacccaattt caggtttagt gaagatgtat
 300
 aaagcaaagg attacaatgt ggatcaccca ctggtgcccc atggcctttc tgtggtgctc
 360
 acgtccccag cgggtgtcac tttcacggcc cagatgtttc cagagcgaca cctggagatg
 420
 gcagaaatac tgggagccga caccgcact gccaggatcc aagatgcagg gctggtgttg
 480
 gcagacacgc tccggaaatt cttattcgat ctggatgttg atgatggcct agcagetgtt
 540
 ggttactcca aagctgatat ccccgacta gtgaaaggaa cgctgccccg gaaagggtc
 600
 accaagcttg caccctgtcc ccagtcagaa gaggatctgg ctgctctgtt tgaagcttca
 660
 atgaaactgt attaatgtc attttaactg aaagaattac cgctggccat tgtagtgctg
 720

agagcaagag ctgatctagc tagggctttg tcttttcac tttgtgcata acttacctgt
 780
 taccagtata ggtgggatat acatttatct tgcaggaaat tcccaaagc tcagagtcca
 840
 gttccttcca taaaacaggc tggacaaatg accactatgt tagaccccca ggctcgactt
 900
 caggggtcag tgttctctgc ccaaacccca cacagaatac tctgcctctg cttcatgtag
 960
 caaatgagca aaaactcagt atctatcaaa agtgtaaatt atatttccta tgcctagtaa
 1020
 ttcacttcat gtctaaaaat ttatctgata gaaacactag caccagtaca tacagaagca
 1080
 tggcaaggat gtttctggca gcacttttct aataataaaa gatttgaaac aaccttaagt
 1140
 attcattatt ggtatataga tcacttatag tatactagac agtggaatac tatggtactg
 1200
 ttaataaaga tgaagtaaatt ctcttggaat aaaaaaaa
 1238

<210> 5238

<211> 212

<212> PRT

<213> Homo sapiens

<400> 5238

Phe	Phe	Phe	Leu	Pro	Ser	Ser	Ile	Ser	Phe	Phe	Phe	Thr	Ile	Ser	Phe
1				5				10					15		
Pro	Lys	Ala	Ala	Pro	Tyr	Ser	Val	Gly	Ile	Ala	Asn	Val	Asp	Val	Leu
		20						25					30		
Leu	Leu	Gly	Ile	Tyr	Ile	Ile	His	Arg	Ala	Val	Arg	Asn	Pro	Asp	Asp
		35					40					45			
Leu	Glu	Ala	Arg	Ser	His	Met	His	Leu	Ala	Ser	Ala	Phe	Ala	Gly	Ile
	50					55					60				
Gly	Phe	Gly	Asn	Ala	Gly	Val	His	Leu	Cys	His	Gly	Met	Ser	Tyr	Pro
65			70						75					80	
Ile	Ser	Gly	Leu	Val	Lys	Met	Tyr	Lys	Ala	Lys	Asp	Tyr	Asn	Val	Asp
			85						90					95	
His	Pro	Leu	Val	Pro	His	Gly	Leu	Ser	Val	Val	Leu	Thr	Ser	Pro	Ala
		100					105						110		
Val	Phe	Thr	Phe	Thr	Ala	Gln	Met	Phe	Pro	Glu	Arg	His	Leu	Glu	Met
		115					120					125			
Ala	Glu	Ile	Leu	Gly	Ala	Asp	Thr	Arg	Thr	Ala	Arg	Ile	Gln	Asp	Ala
	130				135					140					
Gly	Leu	Val	Leu	Ala	Asp	Thr	Leu	Arg	Lys	Phe	Leu	Phe	Asp	Leu	Asp
145				150					155					160	
Val	Asp	Asp	Gly	Leu	Ala	Ala	Val	Gly	Tyr	Ser	Lys	Ala	Asp	Ile	Pro
			165					170						175	
Ala	Leu	Val	Lys	Gly	Thr	Leu	Pro	Gln	Glu	Arg	Val	Thr	Lys	Leu	Ala
		180					185						190		
Pro	Arg	Pro	Gln	Ser	Glu	Glu	Asp	Leu	Ala	Ala	Leu	Phe	Glu	Ala	Ser
		195					200						205		
Met	Lys	Leu	Tyr												
		210													

<210> 5239
<211> 2061
<212> DNA
<213> Homo sapiens

<400> 5239
nttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
60
agccactctt gctttattta caacacgcag gctgtctgta caaacagcgg ccgatattat
120
taaaaacaaa agaggtagtg gagaatcgtc acctttctgc tttccttcct cacttgccca
180
ggctctagta ctccaccttt gagctgccat gcccaatagg ggaagtccaa aattaaaaat
240
acaaccggtg tagaagaaaa taaatgggga gtgaaataga agaaaagatg agggagggga
300
gtgctaatat ttacactaga gttttataga caactgtccc attccatccc aattccaatc
360
ctgacccaga aagtgatggt ggcagggtcca agagacagag attatgtgtc gggacacaga
420
cagcctccca tccccaaccg taatggattc aatttcaagt ccacagagtg gggaggaagg
480
atagggtggg aaagtgcagc actcattttc aaacaagtct cccttgagaa ttcctgcctt
540
gaagtgcaga cagtatccaa gctccagggg ataggctgag gacctgagg ctcaattccc
600
aaatcatggt gtcatttgga agttccaggc taaagtgggt gccatcaggg ctctccagat
660
ttgggaggcc cccctaaccg ccgggcctct ggcctcagtt ccttgcatth ctggcaataa
720
aagaagtcgg ggacgttggt cttcttaatc ttagcacagg agagggtgat ccacgtccca
780
cacaggctgc actcaatcat gggccgccct gcaaagggtt ttcgacagta acatgtgatc
840
agatcccatg agtcacacc tgattctacc atgatgtcct cgtccatgac ccgcatctcg
900
ccttcaactg agctggcatc tccatcttgg cttgtttcag tgctgcccac ctcttggctt
960
tcactgtcag caggagggac tccttcaggg tgcaactgtg cagggggcct aggagcctca
1020
gggggtgttg gcagcacagg gactggggct tcacccctta ccactgttgc catctcttct
1080
ttctcttctt ctctctctc ttctctctcc tcttcagagt ctgtatcact ggggggtgcc
1140
tggggaggcc caggagggtg gagtctatcc cccggttctg ccttttttaa cttccgcttc
1200
ttgctcttct tgattcgaga tctcttttcc ccatcccag gagttggcgg aggcctccga
1260
agcaccctaa agccagcccc agctcctggc cccaactttc gggtctttcg gtccttcttt
1320
cgaggaggat gggagaggtc cccctgggaa aggggcacgg gggtaagagc agcagggggc
1380
cgggaggtat gtgtcaggga tgtgggggac aaaggagatg ccactttggg cccatccaga
1440

tcaaagagag agtccttgag cttcatcttc tcaagcaagg tagcactgtc gggggcctgc
 1500
 agacgagaga aagtggacct tgggggtcct ggctgggtgg gacctgcttg agctgccctt
 1560
 ctcttgatg actttgcttt cttaacaaaa gtctggatgg ttccaagatc tgagggggcc
 1620
 gaggccagc catcactgtc ggccgcactc tctcctcgca atggagagct ggagccagag
 1680
 gctggccagt cactttcttc ttgctaggg ggaatgtaac cagcatatgc caaaacaaaa
 1740
 ctgcagaatt tgttgaaatc ctcaattggt ctcgcgctt tctctggtgg ctgagtctct
 1800
 ggcttaaggg tcggaggtgg atcttcggga ctgggctcgg ccattggcttc cagcatcgcc
 1860
 cctccctc ctcccggtcc ggcgcccccc tccccggagc cggggatccc ggtgcccct
 1920
 ctagtgtcg atgctccac tgcttcgtc cacagaagtg tccgctcag cccggttgag
 1980
 actcgagtcc gctagccgct gccgccacct cctctacca ctgcctccg cactcccgga
 2040
 ccgggcccc tcccccgcg g
 2061

<210> 5240

<211> 226

<212> PRT

<213> Homo sapiens

<400> 5240

Met	Met	Ser	Ser	Ser	Met	Thr	Arg	Ile	Ser	Pro	Ser	Leu	Glu	Leu	Ala
1				5					10					15	
Ser	Pro	Ser	Trp	Leu	Val	Ser	Val	Leu	Pro	Thr	Ser	Leu	Leu	Ser	Leu
			20					25					30		
Ser	Ala	Gly	Gly	Thr	Pro	Ser	Gly	Cys	Thr	Val	Ala	Gly	Gly	Leu	Gly
		35					40					45			
Ala	Ser	Gly	Gly	Val	Gly	Ser	Thr	Gly	Thr	Gly	Ala	Ser	Pro	Pro	Thr
	50					55				60					
Thr	Val	Ala	Ile	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
65				70				75					80		
Ser	Ser	Glu	Ser	Val	Ser	Leu	Gly	Gly	Ala	Trp	Gly	Gly	Pro	Gly	Gly
			85					90					95		
Gly	Ser	Leu	Ser	Pro	Arg	Ser	Ala	Phe	Phe	Asn	Phe	Arg	Phe	Leu	Leu
		100					105						110		
Phe	Leu	Ile	Arg	Asp	Leu	Phe	Ser	Pro	Ser	Pro	Gly	Val	Gly	Arg	Gly
		115				120					125				
Leu	Arg	Ser	Thr	Pro	Lys	Pro	Ala	Pro	Ala	Pro	Gly	Pro	Asn	Phe	Arg
	130					135					140				
Phe	Phe	Arg	Ser	Phe	Phe	Arg	Gly	Gly	Trp	Glu	Arg	Ser	Pro	Trp	Glu
145				150				155					160		
Arg	Gly	Thr	Gly	Val	Arg	Ala	Ala	Gly	Gly	Arg	Glu	Val	Cys	Val	Arg
			165					170					175		
Asp	Val	Gly	Asp	Lys	Gly	Asp	Ala	Thr	Leu	Gly	Pro	Ser	Arg	Ser	Lys
		180					185					190			
Arg	Glu	Ser	Leu	Ser	Phe	Ile	Phe	Ser	Ser	Lys	Val	Ala	Leu	Ser	Gly

195 200 205
 Ala Cys Arg Arg Glu Lys Val Asp Leu Gly Gly Pro Gly Trp Val Gly
 210 215 220
 Pro Ala
 225

<210> 5241
 <211> 461
 <212> DNA
 <213> Homo sapiens

<400> 5241
 gcggcccccg atttcagcc catggatgca tttatcacgt ttgttcctct gcgtgcctcc
 60
 ccctcaatat gccgggggtg taccatttc caagggatga cagcagggcc ccacagcgag
 120
 cccaggctg atccggagcc ctcttcattc ccgtccaggg ccgtttgcac tgctcccgcc
 180
 atcggcacac cttgttcttg ttgtgctggg acggcagcgc cccgtgaggt cagagggttg
 240
 ctgtcacatc tgccaccag tgtggtctcc tggagatttc agtgggttcg tgcttcgctt
 300
 ctcacctggc cagctctgag ttcagcctct cgcctgtggg gacctctgca tctggcgcc
 360
 agaaggagga ggaagaagcc accagagggt gccaggaacc cagtggcagg ggaggtgggg
 420
 ctgagccagg cccgcccgt gtgccgggag ttcccacgcg g
 461

<210> 5242
 <211> 146
 <212> PRT
 <213> Homo sapiens

<400> 5242
 Met Asp Ala Phe Ile Thr Phe Val Pro Leu Arg Ala Ser Pro Ser Ile
 1 5 10 15
 Cys Arg Gly Cys Thr His Phe Gln Gly Met Thr Ala Gly Pro His Ser
 20 25 30
 Glu Pro Gln Ala Asp Pro Glu Pro Ser Ser Ser Pro Ser Arg Ala Val
 35 40 45
 Cys Thr Ala Pro Gly Ile Gly Thr Pro Cys Ser Gly Cys Ala Gly Thr
 50 55 60
 Ala Ala Pro Arg Glu Val Arg Gly Leu Leu Ser His Leu Pro Pro Ser
 65 70 75 80
 Val Val Ser Trp Arg Phe Gln Trp Phe Gly Ala Ser Leu Leu Thr Trp
 85 90 95
 Pro Ala Leu Ser Ser Ala Ser Arg Leu Trp Gly Pro Leu His Pro Gly
 100 105 110
 Gly Arg Arg Arg Lys Lys Pro Pro Glu Val Ala Arg Asn Pro Val
 115 120 125
 Ala Gly Glu Val Gly Leu Ser Gln Ala Arg Pro Leu Cys Arg Glu Phe
 130 135 140
 Pro Arg

145

<210> 5243

<211> 344

<212> DNA

<213> Homo sapiens

<400> 5243

ngaattcctt gcattctctt ctgggccaaa agaataatga ttaaatttaa gaatcaaacc
 60
 tggctggacc ttacagacga gccatttgggt cagaaggtaa ctgtggaccc tgacaactca
 120
 aattgcagtg aagaaagtgc taggttgtct ttgaagcttg gtgatgctgg aaaccccaga
 180
 agtcttgcta taagattcat ccttaccat tacaacaagt tgtccatcca gagttggttt
 240
 agtttgcgcc gagtcgagat catttccaac aattcaatcc aagcagtctt taacccaact
 300
 ggcgtatatg ctccctctgg ttactcctac cgctgccaac gcgt
 344

<210> 5244

<211> 114

<212> PRT

<213> Homo sapiens

<400> 5244

Xaa	Ile	Pro	Cys	Ile	Leu	Phe	Trp	Ala	Lys	Arg	Ile	Met	Ile	Lys	Phe
1				5				10						15	
Lys	Asn	Gln	Thr	Trp	Leu	Asp	Leu	Thr	Asp	Glu	Pro	Phe	Gly	Gln	Lys
			20					25					30		
Val	Thr	Val	Asp	Pro	Asp	Asn	Ser	Asn	Cys	Ser	Glu	Glu	Ser	Ala	Arg
		35					40				45				
Leu	Ser	Leu	Lys	Leu	Gly	Asp	Ala	Gly	Asn	Pro	Arg	Ser	Leu	Ala	Ile
	50				55				60						
Arg	Phe	Ile	Leu	Thr	Asn	Tyr	Asn	Lys	Leu	Ser	Ile	Gln	Ser	Trp	Phe
65				70				75				80			
Ser	Leu	Arg	Arg	Val	Glu	Ile	Ile	Ser	Asn	Asn	Ser	Ile	Gln	Ala	Val
			85				90				95				
Phe	Asn	Pro	Thr	Gly	Val	Tyr	Ala	Pro	Ser	Gly	Tyr	Ser	Tyr	Arg	Cys
			100				105				110				
Gln	Arg														

<210> 5245

<211> 483

<212> DNA

<213> Homo sapiens

<400> 5245

nngccatgga aacgaaagcg gccaaagtaga gctccgtcct gacgcgccgc ctcccgtggg
 60
 ctccggccgg ctaagccgcg gcggacaact atgctgaaag ccaagatcct ctccgtgggg
 120

ccttgcgaga gtggaaaaaac tgttttggcc aacttttctga cagaatcttc tgacatcact
 180
 gaatacagcc caaccaagg agtgaggttt gagtcctgct ggccggccct gatgaaggat
 240
 gctcatggag tggatgatcgt cttcaatgct gacatcccaa gccaccggaa ggaaatggag
 300
 atgtggtatt cctgctttgt ccaacagccg tccttacagg acacacagtg tatgctaatt
 360
 gcacaccaca aaccaggctc tggagatgat aaaggaagcc tgtctttgtc gccacccttg
 420
 aacaagctga agctgggtgca ctcaaacctg gaagatgacc ctgaggagat ccggatggaa
 480
 ttc
 483

<210> 5246

<211> 131

<212> PRT

<213> Homo sapiens

<400> 5246

Met	Leu	Lys	Ala	Lys	Ile	Leu	Phe	Val	Gly	Pro	Cys	Glu	Ser	Gly	Lys	15
1				5					10							
Thr	Val	Leu	Ala	Asn	Phe	Leu	Thr	Glu	Ser	Ser	Asp	Ile	Thr	Glu	Tyr	30
			20					25								
Ser	Pro	Thr	Gln	Gly	Val	Arg	Phe	Glu	Ser	Cys	Trp	Pro	Ala	Leu	Met	45
			35				40									
Lys	Asp	Ala	His	Gly	Val	Val	Ile	Val	Phe	Asn	Ala	Asp	Ile	Pro	Ser	60
			50			55										
His	Arg	Lys	Glu	Met	Glu	Met	Trp	Tyr	Ser	Cys	Phe	Val	Gln	Gln	Pro	80
65					70					75						
Ser	Leu	Gln	Asp	Thr	Gln	Cys	Met	Leu	Ile	Ala	His	His	Lys	Pro	Gly	95
			85					90								
Ser	Gly	Asp	Asp	Lys	Gly	Ser	Leu	Ser	Leu	Ser	Pro	Pro	Leu	Asn	Lys	110
			100					105								
Leu	Lys	Leu	Val	His	Ser	Asn	Leu	Glu	Asp	Asp	Pro	Glu	Glu	Ile	Arg	125
			115				120									
Met	Glu	Phe														
			130													

<210> 5247

<211> 1004

<212> DNA

<213> Homo sapiens

<400> 5247

nngccatgga aacgaaagcg gccaaagtaga gctccgtcct gacgcgccgc ctcccgtggg
 60
 ctccggccgg ctaagccgcg gcggacaact atgctgaaag ccaagatcct cttcgtgggg
 120
 ccttgcgaga gtggaaaaaac tgttttggcc aacttttctga cagaatcttc tgacatcact
 180
 gaatacagcc caaccaagg agtgaggatc ctagaatttg agaaccgcga tgttaccagc
 240

aacaacaaag gcacgggctg tgaattcgag ctatgggact gtggtggcga tgctaagttt
300
gagtcctgct ggccggccct gatgaaggat gctcatggag tggatgacgt cttcaatgct
360
gacatcccaa gccaccggaa ggaaatggag atgtggtatt cctgctttgt ccaacagccg
420
tccttacagg acacacagtg tatgctaatt gcacaccaca aaccaggctc tggagatgat
480
aaaggaagcc tgtctttgtc gccacccttg aacaagctga agctggtgca ctcaaacctg
540
gaagatgacc ctgaggagat ccggatggaa ttcataaagt atttaaaaag cataatcaac
600
tccatgtctg agagcagaga cagggaggag atgtcaatta tgacctagcc agccttcacc
660
tgggactgcc acatccccag tgaaatcagc atgtttctcg gtgcagatct gaaatcacat
720
ccagctcctg atgttttctt ctccctctga ctgcagagga agtggttccta cctgcaggaa
780
ggcacctgtc acacagggcg ttcactcaga ccatctgtgc tctgccctga gttcagttga
840
gaaaatccta ttatcaaatt tggatttcct ggccccagaa cttcccaaag acctgtaaaa
900
tggagggatt taccacctca catatgtcca gttaaacagt ttgtggactt gtaaccgtcg
960
cagcccaatg atacaacagt agtttaatca cgtgaaaaaa aaaa
1004

<210> 5248

<211> 185

<212> PRT

<213> Homo sapiens

<400> 5248

Met	Leu	Lys	Ala	Lys	Ile	Leu	Phe	Val	Gly	Pro	Cys	Glu	Ser	Gly	Lys
1				5					10					15	
Thr	Val	Leu	Ala	Asn	Phe	Leu	Thr	Glu	Ser	Ser	Asp	Ile	Thr	Glu	Tyr
			20					25					30		
Ser	Pro	Thr	Gln	Gly	Val	Arg	Ile	Leu	Glu	Phe	Glu	Asn	Pro	His	Val
		35				40					45				
Thr	Ser	Asn	Asn	Lys	Gly	Thr	Gly	Cys	Glu	Phe	Glu	Leu	Trp	Asp	Cys
	50				55						60				
Gly	Gly	Asp	Ala	Lys	Phe	Glu	Ser	Cys	Trp	Pro	Ala	Leu	Met	Lys	Asp
65				70				75						80	
Ala	His	Gly	Val	Val	Ile	Val	Phe	Asn	Ala	Asp	Ile	Pro	Ser	His	Arg
			85					90						95	
Lys	Glu	Met	Glu	Met	Trp	Tyr	Ser	Cys	Phe	Val	Gln	Gln	Pro	Ser	Leu
		100						105					110		
Gln	Asp	Thr	Gln	Cys	Met	Leu	Ile	Ala	His	His	Lys	Pro	Gly	Ser	Gly
	115					120						125			
Asp	Asp	Lys	Gly	Ser	Leu	Ser	Leu	Ser	Pro	Pro	Leu	Asn	Lys	Leu	Lys
	130				135						140				
Leu	Val	His	Ser	Asn	Leu	Glu	Asp	Asp	Pro	Glu	Glu	Ile	Arg	Met	Glu
145				150					155					160	
Phe	Ile	Lys	Tyr	Leu	Lys	Ser	Ile	Ile	Asn	Ser	Met	Ser	Glu	Ser	Arg

165
 Asp Arg Glu Glu Met Ser Ile Met Thr
 180 185

170

175

<210> 5249
 <211> 653
 <212> DNA
 <213> Homo sapiens

<400> 5249
 nnacgcgtgc gcgccaccgg cccggcaggt gctgtcctta ttcccagccc agtcaagagc
 60
 taccggggct ggctagtcac gggggagccc agtagagagg agtataaaat ccagtccttt
 120
 gatgcagaga cccagcagct gctgaagaca gcactcaaag atccgggtgc tgtggacttg
 180
 gagaaagtgg ccaatgtgat tgtggaccat tctctgcagg actgtgtgtt cagcaaggaa
 240
 gcaggacgca tgtgctacgc catcattcag gcagagagta aacaagcagg ccagagtgtc
 300
 ttccgacgtg gactcctcaa cgggctgcag caggagtacc aggctcggga gcagctgcga
 360
 gcacgctccc tgcagggctg ggtctgctat gtcaccttta tctgcaacat ctttgactac
 420
 ctgagggtga acaacatgcc catgatggcc ctggtgaacc ctgtctatga ctgcctcttc
 480
 cggttgcccc agccagacag tttgagcaag gaggaggagg tggactgttt ggtgctgcag
 540
 ctgcaccggg ttggggagca gctggagaaa atgaatgggc agcgcatgga tgagctcttt
 600
 gtgctgatcc gggatggctt cctgctccca actggcctca gtcctctggc cca
 653

<210> 5250
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 5250
 Xaa Arg Val Arg Ala Thr Gly Pro Ala Gly Ala Val Leu Ile Pro Ser
 1 5 10 15
 Pro Val Lys Ser Tyr Arg Gly Trp Leu Val Met Gly Glu Pro Ser Arg
 20 25 30
 Glu Glu Tyr Lys Ile Gln Ser Phe Asp Ala Glu Thr Gln Gln Leu Leu
 35 40 45
 Lys Thr Ala Leu Lys Asp Pro Gly Ala Val Asp Leu Glu Lys Val Ala
 50 55 60
 Asn Val Ile Val Asp His Ser Leu Gln Asp Cys Val Phe Ser Lys Glu
 65 70 75 80
 Ala Gly Arg Met Cys Tyr Ala Ile Ile Gln Ala Glu Ser Lys Gln Ala
 85 90 95
 Gly Gln Ser Val Phe Arg Arg Gly Leu Leu Asn Arg Leu Gln Gln Glu
 100 105 110
 Tyr Gln Ala Arg Glu Gln Leu Arg Ala Arg Ser Leu Gln Gly Trp Val

```

      115      120      125
Cys Tyr Val Thr Phe Ile Cys Asn Ile Phe Asp Tyr Leu Arg Val Asn
      130      135      140
Asn Met Pro Met Met Ala Leu Val Asn Pro Val Tyr Asp Cys Leu Phe
145      150      155      160
Arg Leu Ala Gln Pro Asp Ser Leu Ser Lys Glu Glu Glu Val Asp Cys
      165      170      175
Leu Val Leu Gln Leu His Arg Val Gly Glu Gln Leu Glu Lys Met Asn
      180      185      190
Gly Gln Arg Met Asp Glu Leu Phe Val Leu Ile Arg Asp Gly Phe Leu
      195      200      205
Leu Pro Thr Gly Leu Ser Ser Leu Ala
      210      215

```

<210> 5251
 <211> 372
 <212> DNA
 <213> Homo sapiens

```

<400> 5251
atgaacaggc gtgttatatc tgctaaccga tatctagggg gcacctcaa cggctatgcc
60
caccacagcg ggacggcact tcattatgac gatgtcccgt gcacaaacgg ctccggggaa
120
ccggaagacg gctttcctgc tttctgcagc agaagcttgg gagaagaagg ggcttttgaa
180
aaccacagcc tgtacgataa ctggccgcct ccgcacatct ttgcccgcta ctctcctgct
240
gacagaaagg cctctaggct gtctgctgac aagctgtcct ctaaccatta caaataccct
300
gcctctgctc agtctgtcac taatacctct tctgtgggga gggcgtctct cgggctcaac
360
tcgcagcttc ag
372

```

<210> 5252
 <211> 124
 <212> PRT
 <213> Homo sapiens

```

<400> 5252
Met Asn Arg Arg Val Ile Ser Ala Asn Pro Tyr Leu Gly Gly Thr Ser
1      5      10      15
Asn Gly Tyr Ala His Pro Ser Gly Thr Ala Leu His Tyr Asp Asp Val
      20      25      30
Pro Cys Ile Asn Gly Ser Gly Glu Pro Glu Asp Gly Phe Pro Ala Phe
      35      40      45
Cys Ser Arg Ser Leu Gly Glu Glu Gly Ala Phe Glu Asn Pro Gly Leu
      50      55      60
Tyr Asp Asn Trp Pro Pro His Ile Phe Ala Arg Tyr Ser Pro Ala
65      70      75      80
Asp Arg Lys Ala Ser Arg Leu Ser Ala Asp Lys Leu Ser Ser Asn His
      85      90      95
Tyr Lys Tyr Pro Ala Ser Ala Gln Ser Val Thr Asn Thr Ser Ser Val

```

100 105 110
 Gly Arg Ala Ser Leu Gly Leu Asn Ser Gln Pro Gln
 115 120

<210> 5253
 <211> 898
 <212> DNA
 <213> Homo sapiens

<400> 5253
 ngaatatcca tgcagcgatc ctcaaggaca aactctgctg ctttttctct ttgtggattt
 60
 ccacagtgc tttccagtcc agcaaatgga aatctgggga gtctatactt tgctcacaac
 120
 tcattctcaat gccatccttg tggagagcca cagtgtagtg caagggtcca tccaattcac
 180
 tgtggacaag gtcttgagc aacatcacca ggctgccaag gctcagcaga aactacaggc
 240
 ctcactctca gtggctgtga actccatcat gagtattctg actggaagca ctaggagcag
 300
 cttccgaaag atgtgtctcc agacccttca agcagctgac acacaagagt tcaggaccaa
 360
 actgcacaaa gtatttcgtg agatcaccca acaccaatct cttcaccact gctcatgtga
 420
 ggtgaagcag cagctaacc tagaaaaaaa ggactcagcc cagggcactg aggacgcacc
 480
 tgataacagc agcctggagc tcctagcaga taccagcggg caagcagaaa acaagaggct
 540
 caagaggggc agcccccgca tagaggagat gcgagctctg cgctctgcca gggccccgag
 600
 cccgtcagag gccgccccgc gccgcccga agccaccgcg gccccctca ctcttagagg
 660
 aaggagcac cgcgaggctc acggcagggc cctggcgccg ggcagggcga gcctcggaag
 720
 ccgcctggag gacgtgctgt ggctgcagga ggtctccaac ctgtcagagt ggctgagtcc
 780
 cagccctggg ccctgagccg ggtccccttc cgcaagcgcc caccgatccg gaggtgcgg
 840
 gcagccgtta tcccgtggtt taataaagct gccgcgcgct caaaaaaaaa aaaaaaaa
 898

<210> 5254
 <211> 56
 <212> PRT
 <213> Homo sapiens

<400> 5254
 Gln Gln Pro Gly Ala Pro Ser Arg Tyr Gln Arg Ala Ser Arg Lys Gln
 1 5 10 15
 Glu Ala Gln Glu Gly Gln Pro Pro His Arg Gly Asp Ala Ser Ser Ala
 20 25 30
 Leu Cys Gln Gly Pro Glu Pro Val Arg Gly Arg Pro Ala Pro Pro Gly
 35 40 45
 Ser His Arg Gly Pro Pro His Ser

50

55

<210> 5255

<211> 1410

<212> DNA

<213> Homo sapiens

<400> 5255

nncctgcctc cctcaggcac cagatccagt gtcctagtga aacgctggat cctagatccc
60
caaccccaga tccccatgcc tcgagccctg gatctccaag ctgagctgct ggattctgga
120
tgtcaacaaa cctcaccact ggatcctgac aaccacaatg cctggatcct ggggccccca
180
tactggatc ccagatcccc tctctccacc cactggattc ctgcattggt ttttggtttt
240
ttgttttttt ttaacctga cactgggtct cagatccttc tgctgactgc cagatccctg
300
catttcaagc actacgcctt ccacccccag gactggatc ccagattccc aagccttcac
360
ccaccagatt ctggctccta aaacaagtgc gggggcccca gtggcacagc aagtggatcc
420
tggcaactgc agctgctgga ttccagattc tgggtcccca atccctctgc ccagtcctc
480
aatgttgaag cctcatctct tgaaggcaga tcctgatatt ccaaggcact gaatcccaag
540
ccctgaatcc ccggtttctg atctgaatct tccaggcgcc ggggtccaaa tgttcaggcc
600
ccaagtctag atcctggcag ccagtcaca gactatccca cacacactgg tgcccagagc
660
cggcttctca tgacatgaaa ttgcatggtc gagggagtct gtggggaagg aagcccagg
720
cctggctgca acctgcacgg atgctggatt cccctcacc ccacctctgc atggccaccc
780
cctcccagcc ctgtggggaa actgttcctt ggaaccactc cactccctgc atccccacac
840
ttcacagcat cttccatccc cctcccacct tctaggcgaa tagtcccag agctgtgttc
900
ctccaagggg tccgaggaat cactcactcc tggaggctgg caaggagaca gtctgaggcc
960
agggacacat gaagggatgt cccaccccca gcactatcag ggcctcccca ggcttccaga
1020
gttgaagcc aggagaaaat cggcaaagac cacccttccc taaaccaag caccatga
1080
tgcaaaaaac aaaaacaaaa aaaaccacca aatccccaaa ttcattccag atctattttt
1140
ctaccagaga gaggagcaaa gtcctcctcc cctgcgcctt tacattctgc acttcatagt
1200
tggattctga gcttaggac atctggagac cccatggagg gacttggaaa ggggaactgg
1260
gatttgggga ggggctggag gacttccgca cgcttccacc tccttcgacc tccactgcgc
1320
cccacctccc tgctgtgtg tggtatttca aaggaaaaga acaaaaggaa taaattttct
1380

aagctctttta aaaaaaaaaa aaaaaaaaaa
1410

<210> 5256
<211> 95
<212> PRT
<213> Homo sapiens

<400> 5256
Met Val Glu Gly Val Cys Gly Glu Gly Ser Pro Gly Pro Gly Cys Asn
1 5 10 15
Leu His Gly Cys Trp Ile Pro Pro His Pro Thr Ser Ala Trp Pro Pro
20 25 30
Pro Pro Ser Pro Val Gly Lys Leu Phe Pro Gly Thr Thr Pro Leu Pro
35 40 45
Ala Ser Pro His Phe Thr Ala Ser Ser Ile Pro Leu Pro Pro Ser Arg
50 55 60
Arg Ile Val Pro Arg Ala Val Phe Leu Gln Gly Val Arg Gly Ile Thr
65 70 75 80
His Ser Trp Arg Leu Ala Arg Arg Gln Ser Glu Ala Arg Asp Thr
85 90 95

<210> 5257
<211> 1366
<212> DNA
<213> Homo sapiens

<400> 5257
ncaggctctg tgttggttg agcgagcatg tgggtctgca gtaccctgtg gcgggtgcga
60
accccgcccg gcagtggcgg gggcctgctc ccagcttctg gctgtcacgg acctgccgcc
120
tcctcctact ccgcatccgc cgagcctgcc cgggtccgcg gccttgctta tgggcaccac
180
gggatccag ccaaggctgt cgaactcaag aacctggagc tagctgctgt gagaggatca
240
gatgtccgtg tgaagatgct ggcggcccct atcaatccat ctgacataaa tatgatccaa
300
ggaaactacg gactccttcc tgaactgcct gctgttgag ggaacgaagg tgttgacag
360
gtggtagcgg tgggcagcaa tgtgaccggg ctgaagccag gagactgggt gattccagca
420
aatgctggtt tagactcagg aacctggcgg accgaggctg tggtcagcga ggaagcactg
480
atccaagttc cgagtgcacat ccctcttcag agcgtgcga ccctgggtgt caatccctgc
540
acagcctaca ggatgttgat ggacttcgag caactgcagc caggggattc tgtcatccag
600
aatgcatcca acagcggagt ggggcaagca gtcacccaga tcgccgcagc cctgggccta
660
agaaccatca atgtggtccg agacagacct gatatccaga agctgagtga cagactgaag
720
agtctggggg ctgagcatgt catcacagaa gaggagctaa gaaggccga aatgaaaaac
780

ttctttaagg acatgccccca gccacggctt gctctcaact gtgttggtgg gaaaagctcc
 840
 acagagctgc tgcggcagtt agcgcgtgga ggaaccatgg taacctatgg ggggatggcc
 900
 aagcagccccg tcgtagcctc tgtgagcctg ctcattttta aggatctcaa acttcgaggg
 960
 ttttggttgt cccagtggaa gaaggatcac agtccagacc agttcaagga gctgatcctc
 1020
 acactgtgcy atctcatccg ccgaggccag ctcacagccc ctgcctgctc ccagggtccc
 1080
 ctgcaggact accagtctgc cttggaagcc tccatgaagc ccttcatatc ttcaaagcag
 1140
 attctcacca tgtgatcatc ccaaaagagc tggagtgaca tgggagggga ggcggatctg
 1200
 aggggctggg tgcaggcccc tcagttgggg ctcccacctt ccccagacta ctgttctcct
 1260
 cactgcctct tcctattagg aggatggtga agccagccac ggttttcccc agggccagcc
 1320
 ttaaggtatc taataaagtc tgaactctcc cttccaaaaa aaaaaa
 1366

<210> 5258

<211> 375

<212> PRT

<213> Homo sapiens

<400> 5258

Met	Trp	Val	Cys	Ser	Thr	Leu	Trp	Arg	Val	Arg	Thr	Pro	Pro	Gly	Ser
1			5					10						15	
Gly	Gly	Gly	Leu	Pro	Ala	Ser	Gly	Cys	His	Gly	Pro	Ala	Ala	Ser	
			20				25					30			
Ser	Tyr	Ser	Ala	Ser	Ala	Glu	Pro	Ala	Arg	Val	Arg	Gly	Leu	Val	Tyr
		35				40						45			
Gly	His	His	Gly	Asp	Pro	Ala	Lys	Val	Val	Glu	Leu	Lys	Asn	Leu	Glu
	50					55					60				
Leu	Ala	Ala	Val	Arg	Gly	Ser	Asp	Val	Arg	Val	Lys	Met	Leu	Ala	Ala
65					70				75				80		
Pro	Ile	Asn	Pro	Ser	Asp	Ile	Asn	Met	Ile	Gln	Gly	Asn	Tyr	Gly	Leu
			85					90					95		
Leu	Pro	Glu	Leu	Pro	Ala	Val	Gly	Gly	Asn	Glu	Gly	Val	Ala	Gln	Val
		100					105						110		
Val	Ala	Val	Gly	Ser	Asn	Val	Thr	Gly	Leu	Lys	Pro	Gly	Asp	Trp	Val
		115				120						125			
Ile	Pro	Ala	Asn	Ala	Gly	Leu	Asp	Ser	Gly	Thr	Trp	Arg	Thr	Glu	Ala
	130				135						140				
Val	Phe	Ser	Glu	Glu	Ala	Leu	Ile	Gln	Val	Pro	Ser	Asp	Ile	Pro	Leu
145					150				155					160	
Gln	Ser	Ala	Ala	Thr	Leu	Gly	Val	Asn	Pro	Cys	Thr	Ala	Tyr	Arg	Met
			165					170					175		
Leu	Met	Asp	Phe	Glu	Gln	Leu	Gln	Pro	Gly	Asp	Ser	Val	Ile	Gln	Asn
		180					185						190		
Ala	Ser	Asn	Ser	Gly	Val	Gly	Gln	Ala	Val	Ile	Gln	Ile	Ala	Ala	Ala
		195				200						205			
Leu	Gly	Leu	Arg	Thr	Ile	Asn	Val	Val	Arg	Asp	Arg	Pro	Asp	Ile	Gln

210 215 220
 Lys Leu Ser Asp Arg Leu Lys Ser Leu Gly Ala Glu His Val Ile Thr
 225 230 235 240
 Glu Glu Glu Leu Arg Arg Pro Glu Met Lys Asn Phe Phe Lys Asp Met
 245 250 255
 Pro Gln Pro Arg Leu Ala Leu Asn Cys Val Gly Gly Lys Ser Ser Thr
 260 265 270
 Glu Leu Leu Arg Gln Leu Ala Arg Gly Gly Thr Met Val Thr Tyr Gly
 275 280 285
 Gly Met Ala Lys Gln Pro Val Val Ala Ser Val Ser Leu Leu Ile Phe
 290 295 300
 Lys Asp Leu Lys Leu Arg Gly Phe Trp Leu Ser Gln Trp Lys Lys Asp
 305 310 315 320
 His Ser Pro Asp Gln Phe Lys Glu Leu Ile Leu Thr Leu Cys Asp Leu
 325 330 335
 Ile Arg Arg Gly Gln Leu Thr Ala Pro Ala Cys Ser Gln Val Pro Leu
 340 345 350
 Gln Asp Tyr Gln Ser Ala Leu Glu Ala Ser Met Lys Pro Phe Ile Ser
 355 360 365
 Ser Lys Gln Ile Leu Thr Met
 370 375

<210> 5259

<211> 306

<212> DNA

<213> Homo sapiens

<400> 5259

ctgaattgct gtgagggcag aacacccaag gagacaatag aaaatttggt gcacagaatg
 60
 actgaagaga agacgctgac tgctgagggt ttggtaaaac tcctccaggc tgtgaagacg
 120
 actttcccaa acctgggcct tctgctagag aagttgcaga aatcagccac tttgccaagc
 180
 accacagtcc aaccaagccc tgatgattat gggactgagc tattgagacg ctatcatgaa
 240
 aacctctctg agattttcac agacaaccag attttattaa agatgatctc acacatgaca
 300
 agttta
 306

<210> 5260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 5260

Met Thr Glu Glu Lys Thr Leu Thr Ala Glu Gly Leu Val Lys Leu Leu
 1 5 10 15
 Gln Ala Val Lys Thr Thr Phe Pro Asn Leu Gly Leu Leu Leu Glu Lys
 20 25 30
 Leu Gln Lys Ser Ala Thr Leu Pro Ser Thr Thr Val Gln Pro Ser Pro
 35 40 45
 Asp Asp Tyr Gly Thr Glu Leu Leu Arg Arg Tyr His Glu Asn Leu Ser

50	55	60
Glu Ile Phe Thr Asp Asn Gln Ile Leu Leu Lys Met Ile Ser His Met		
65	70	75
Thr Ser Leu		

<210> 5261

<211> 2394

<212> DNA

<213> Homo sapiens

<400> 5261

```

ncggcgcgcca tggcgaccccc ggccaggcccc ggcgaggccg aggacgcggc cgagcggcccc
60
ctccaggatg agccggcggc ggcggcggca ggcccgggca agggtcgctt cctcgtccgc
120
atctgtttcc agggagacga gggcgccctgc ccgacccggg acttcgtggt aggagcgctt
180
atcctgcgct ccatcggtcat ggacccgagc gacatctacg cggtcacca gatccccggc
240
agccgcgaat tcgacgtgag cttccgctca gcggagaagc tggccctggt cctacgcgtc
300
tacgaggaga agcgggagca ggaggactgc tgggagaact ttgtggtgct ggggcggagc
360
aagtccagct tgaagacgct cttcatcctc ttccggaacg agacggtgga cgtggaggac
420
attgtgactt ggctcaagcg cactgcgac gtgctggcgg tgccggtgaa agtgaccgac
480
aggtttgga tctggaccgg ggagtacaaa tgcgagatcg agctgcgcca gggggagggc
540
gggttcaggc acttgccagg ggccttcttc ctgggggccc agaggggcta cagctggtac
600
aaggggcagc ccaagacatg ctttaaagt gggtcccga cccacatgag cggcagctgc
660
acgcaggaca ggtgcttcag gtgcggggag gaggggcacc tgagccctta ctgccggaag
720
ggcatcgtgt gcaacctctg tggcaagcga ggacacgcct ttgccagtg tcccaaagca
780
gtgcacaatt ccgtggcagc tcagctaacc ggcgtggccg ggcactaac accgcctgc
840
ctgccagggt gaacacacag ccagcttatc cctcttaagt gccaaaactt ttttttaaac
900
cattttttat cgtttttgaa ggagatcttt ttaaaacctt caagagacat ctctctatgc
960
cttcttaaac cgagtttact ccatttcagc ctgttctgaa ttggtgactc tgtcaccaat
1020
aacgactgcg gagaactgta gcgtgcagat gtgttgcccc tcccttttaa aattttatct
1080
tcgtttttct attgggtatt tgttttgttt cttgtacttt ttctctctct ccttgcccc
1140
ctcccgccct ccccgcccc taccttttct tccctggat tttaccctt tgggctgcct
1200
tgctcatctt tatgccccag cactaggtac ggggccaac acgtggtagg cactccatca
1260

```

gtgtttgctg aattgaaaac attgttgact gtggcttcta tcagagtgc taccttttgc
 1320
 agctcttccc ctccctcatt taatttgctg cttttaatct acgtggctg agaatttgctg
 1380
 aaaccagtgt tgtagaagt gtatataatc tgaatcaata agctctgaat ggtggccaag
 1440
 ggctctctct atggcacaaa gatgcatgga cttcatgaca gctcttttgg tggtcagaa
 1500
 gccatttttt atagaatcat ggaatctaga atattcctgc tggaaagaac ctgagagtgtg
 1560
 gtttggacca attccctggg tttccagcag atgaaacagg cccaaagagg ttaaagtact
 1620
 gggtgaaaat cacatagctg tctggtgcca gagccagcct atagtagagt cccctgaccc
 1680
 caagcccggt gctcattcca ctacctctca cacttcacaa caatttcctc aacacttgag
 1740
 ggccagaaa gtctgatctc tccagaatga tcagcccaga ggaatgctga gaaatcacct
 1800
 ggaggaggga gcagaaagag aagggtttta aggaggggct tctgaatact tgggagatac
 1860
 ggaacggacc aaggaccaca ctccagggtg cattcgttgc tccctggggc accacttctg
 1920
 gattacagtg tgccagggtc tttggaggcc ctaccccttc cccattcatt gccaccagt
 1980
 agaaatgggg gtgcccctgt gtaaagaaac ctaccaaagg tttacatttg caccttagcc
 2040
 tcaatagcta cgaaccctag agaagcagct agctggagct catgtgcaac tcctgattct
 2100
 caggagaaag atggatttta acccaaaatt atgagtgage tgttaactct aaaatgtact
 2160
 tgggagatag gccaagcgag aggtcatggg ccaactaagt gttatccagt agaaaagaca
 2220
 gtacactgct tttcttttag tgtttgcttt tcctttgcta tatgttttgc tatttccttg
 2280
 tggcttagaa tgtaaaattg attgttaaaa gttttgttct gaataaatat ttatcttttg
 2340
 tattgccaaa aaacacttga gggcccagaa agtctgatct ctccagaatg atca
 2394

<210> 5262

<211> 275

<212> PRT

<213> Homo sapiens

<400> 5262

Xaa	Ala	Ala	Met	Ala	Thr	Pro	Ala	Arg	Pro	Gly	Glu	Ala	Glu	Asp	Ala
1			5						10					15	
Ala	Glu	Arg	Pro	Leu	Gln	Asp	Glu	Pro	Ala	Ala	Ala	Ala	Ala	Gly	Pro
			20					25						30	
Gly	Lys	Gly	Arg	Phe	Leu	Val	Arg	Ile	Cys	Phe	Gln	Gly	Asp	Glu	Gly
			35				40					45			
Ala	Cys	Pro	Thr	Arg	Asp	Phe	Val	Val	Gly	Ala	Leu	Ile	Leu	Arg	Ser
	50					55					60				

Ile Gly Met Asp Pro Ser Asp Ile Tyr Ala Val Ile Gln Ile Pro Gly
 70 75 80
 Ser Arg Glu Phe Asp Val Ser Phe Arg Ser Ala Glu Lys Leu Ala Leu
 85 90 95
 Phe Leu Arg Val Tyr Glu Glu Lys Arg Glu Gln Glu Asp Cys Trp Glu
 100 105 110
 Asn Phe Val Val Leu Gly Arg Ser Lys Ser Ser Leu Lys Thr Leu Phe
 115 120 125
 Ile Leu Phe Arg Asn Glu Thr Val Asp Val Glu Asp Ile Val Thr Trp
 130 135 140
 Leu Lys Arg His Cys Asp Val Leu Ala Val Pro Val Lys Val Thr Asp
 145 150 155 160
 Arg Phe Gly Ile Trp Thr Gly Glu Tyr Lys Cys Glu Ile Glu Leu Arg
 165 170 175
 Gln Gly Glu Gly Gly Val Arg His Leu Pro Gly Ala Phe Phe Leu Gly
 180 185 190
 Ala Glu Arg Gly Tyr Ser Trp Tyr Lys Gly Gln Pro Lys Thr Cys Phe
 195 200 205
 Lys Cys Gly Ser Arg Thr His Met Ser Gly Ser Cys Thr Gln Asp Arg
 210 215 220
 Cys Phe Arg Cys Gly Glu Glu Gly His Leu Ser Pro Tyr Cys Arg Lys
 225 230 235 240
 Gly Ile Val Cys Asn Leu Cys Gly Lys Arg Gly His Ala Phe Ala Gln
 245 250 255
 Cys Pro Lys Ala Val His Asn Ser Val Ala Ala Gln Leu Thr Gly Val
 260 265 270
 Ala Gly His
 275

<210> 5263

<211> 319

<212> DNA

<213> Homo sapiens

<400> 5263

tctagaacaa atgagaacca gtatcagaag gtgacacagg agagtttggtg acagtgccga
 60
 tttcagctga cgaattacca gaagatccag cattgctgtc gtttccatca aaagtagctg
 120
 gaagtagata cacattatct tctgacaggg gggaagtatc agaagaaagc atgttggttg
 180
 tgccttgga aatctttttt ggttgatatt gaaatgccat ttcaccagtt tcaagccttc
 240
 ttcccaagag tgacttatct gtatcttact ttgtagcttc cattcagaca ttgttgctct
 300
 atttattaaa tccatggct
 319

<210> 5264

<211> 105

<212> PRT

<213> Homo sapiens

<400> 5264

Met Asp Leu Ile Asn Arg Ala Thr Met Ser Glu Trp Lys Leu Gln Ser
 1 5 10 15
 Lys Ile Gln Ile Ser His Ser Trp Glu Glu Gly Leu Lys Leu Val Lys
 20 25 30
 Trp His Phe Asn Ile Asn Gln Lys Arg Phe Ser Lys Ala Gln Pro Thr
 35 40 45
 Cys Phe Leu Leu Ile Leu Pro Pro Cys Gln Lys Ile Met Cys Ile Tyr
 50 55 60
 Phe Gln Leu Leu Leu Met Glu Thr Thr Ala Met Leu Asp Leu Leu Val
 65 70 75 80
 Ile Arg Gln Leu Lys Ser Ala Leu Ser Gln Thr Leu Leu Cys His Leu
 85 90 95
 Leu Ile Leu Val Leu Ile Cys Ser Arg
 100 105

<210> 5265

<211> 3203

<212> DNA

<213> Homo sapiens

<400> 5265

cgccccgggca ggtcggagac ggaggaaagg tggcagccag attacttaga gaggcacaga
 60
 ggagagagat cgggggtgagt cgccatgggg actcccaggg cccagcaccc gccgcctccc
 120
 cagctgctgt tcctaattct gctgagctgt ccctggatcc agggctctgcc cctgaaggag
 180
 gaggagatat tgccagagcc tggaagttag acccccacgg tggcctctga ggccctggct
 240
 gaactgcttc atggggccct gctgaggagg ggcccagaga tgggctacct gccagggcct
 300
 ccccttgggc ctgagggagg agaggaggag acgacgacca ccatcatcac cagcacaact
 360
 gttaccacta cggtgaccag cccagttctg tgtaataaca acatctccga gggcgaaggg
 420
 tatgtggagt ctccagatct ggggagcccc gtcagccgca ccctggggct cctggactgc
 480
 acttacagca tccatgtcta ccctggctac ggcattgaga tccaggtgca gacgctgaac
 540
 ctgtcacagg aagaggagct cctggtgctg gctggtgggg gatccccagg cctggccccc
 600
 cgactcctgg ccaactcatc catgcttgga gaaggacaag tccttcggag cccaaccaac
 660
 cggctgcttc tgcacttcca gagcccacgg gtcccaaggg gcggtggctt caggatccac
 720
 tatcaggcct acctcctgag ctgtggcttc cctccccggc cggcccatgg ggacgtgagt
 780
 gtgacggacc tgcacctgg gggcactgcc acctttcact gtgattcggg ctaccagctg
 840
 cagggagagg agaccctcat ctgcctcaat ggcacccggc catcctggaa cggtgaaacc
 900
 cccagctgca tggcatcctg tggtggcacc atccacaatg ccaccctggg ccgcatcgtg
 960

tccccagagc ctgggggagc cgtagggccc aacctcacct gccgttgggt cattgaagca
1020
gctgaggggc gccggctgca cctgcacttt gaaagggctc cgctggatga ggacaatgac
1080
cggctgatgg tgcgctcagg gggcagcccc ctatcccccg tgatctatga ttcggacatg
1140
gacgatgtcc ccgagcgggg tctcatcagt gacgcccagt ccctctacgt ggagctgctg
1200
tcagagacac ctgccaatcc cctgctgtta agccttcgat ttgaagcctt tgaggaggat
1260
cgctgcttcg ccccttcctt ggcacatgga aatgtcacta ccacggaccc tgagtatcgc
1320
ccaggggcac tggcaacctt ctcgtgctc ccaggatatg ccctggagcc ccctgggccc
1380
cccaatgcca tcgaatgtgt ggatcccaca gaacccact ggaacgacac agagccggcc
1440
tgcaaagcca tgtgtggagg ggagctgtcg gaaccagctg gcgtggctct ctctcccgac
1500
tggccccaga gctatagccc gggccaagac tgcgtgtggg gcgtgcacgt ccaggaagag
1560
aagcgcactt tgctccaagt tgagatattg aatgtgcggg aaggggacat gctgacgctg
1620
ttcgacgggg acggtcccag cgcccagtc ttggcccagc tgcggggacc tcagccgcgc
1680
cgccgccttc tctcctctgg gcccgcctc aactgcagt ttcaggcacc gcccgggccc
1740
ccaaatccag gcctgggcca gggcttcgta ttgcacttca aagaggctcc gaggaacgac
1800
acgtgccccg agctgccacc tccggagtgg ggctggagaa cggcatccca cggggacctg
1860
atccggggca cgggtgtcac ctaccagtgc gagcctggct acgagctgct aggctccgac
1920
attctcactt gccagtggga cctgtcttgg agcgcgcgc cgcccgctg ccaaaagatc
1980
atgacttgtg ctgaccctgg cgagattgcc aacgggcacc gcaccgcctc ggacgccggc
2040
ttccccgttg gctcccacgt ccagtaccgc tgcctgccag ggtacagcct cgagggggca
2100
gccatgctca cctgctacag ccgggacaca ggcacacca agtggagcga tagggctccc
2160
aaatgcgct tgaagtacga gccgtgcctg aaccggggg tccccagaa tggctaccag
2220
acgtgtaca agcaccacta ccaggcgggc gagtctctgc gcttctctg ctatgagggc
2280
tttgagctta tcggcgaggt caccatcacc tgtgtgccc gccacccctc ccagtggacc
2340
agccagcccc cactctgcaa agttgcctat gaggagctcc tggacaaccg aaaactggaa
2400
gtgaccaga ccacagatcc atcacggcag ctggaagggg ggaacctggc cctggccatc
2460
ctgctgcctc taggcttggg cattgtcctc ggcagtggcg ttacatcta ctacaccaag
2520
cttcaggga agtccctttt cggcttctcg ggctcccact cctacagccc catcaccgtg
2580

gagtcggact tcagcaaccc gctgtatgaa gctggggata cgcgggagta tgaagtttcc
 2640
 atctgaaccc caagactaca gctgcaggac ccaggacgcc cctcccctcc tcattcgggg
 2700
 agagggaaat acgggacccg gtctctgcct cctggctgcc ctctccctg gctgtgtaaa
 2760
 tagtctccct atcccacgag ggggctttga tggccctgga gatcctacag taaataaacc
 2820
 agcatcctgc cgcccaaagc cgctcttct cagttgccaa acgagggggc tgccccccgc
 2880
 cctaccggct tttggattct gggaggggaa ctctgcctcc ctgcaaattc tgcagcccct
 2940
 cctgcccagg gcacccctca aggactgccc ccgatagctc tactgttccc ttggccacga
 3000
 aggtgcccc ctcccagatg ccttgccct aggccctgact ccggccagga gggtcagaag
 3060
 aaggacaaag gggagagctg ggacaaggcc ttgccccctt cctgccatct cccaaccca
 3120
 cagtctctcc acctttgctt ctgaattctt gtttttgagc aataaacaga aaatcgccac
 3180
 ttgtaaaaaa aaaaaaaaaa aaa
 3203

<210> 5266

<211> 853

<212> PRT

<213> Homo sapiens

<400> 5266

Met Gly Thr Pro Arg Ala Gln His Pro Pro Pro Pro Gln Leu Leu Phe
 1 5 10 15
 Leu Ile Leu Leu Ser Cys Pro Trp Ile Gln Gly Leu Pro Leu Lys Glu
 20 25 30
 Glu Glu Ile Leu Pro Glu Pro Gly Ser Glu Thr Pro Thr Val Ala Ser
 35 40 45
 Glu Ala Leu Ala Glu Leu Leu His Gly Ala Leu Leu Arg Arg Gly Pro
 50 55 60
 Glu Met Gly Tyr Leu Pro Gly Pro Pro Leu Gly Pro Glu Gly Gly Glu
 65 70 75 80
 Glu Glu Thr Thr Thr Thr Ile Ile Thr Thr Thr Thr Val Thr Thr Thr
 85 90 95
 Val Thr Ser Pro Val Leu Cys Asn Asn Asn Ile Ser Glu Gly Glu Gly
 100 105 110
 Tyr Val Glu Ser Pro Asp Leu Gly Ser Pro Val Ser Arg Thr Leu Gly
 115 120 125
 Leu Leu Asp Cys Thr Tyr Ser Ile His Val Tyr Pro Gly Tyr Gly Ile
 130 135 140
 Glu Ile Gln Val Gln Thr Leu Asn Leu Ser Gln Glu Glu Glu Leu Leu
 145 150 155 160
 Val Leu Ala Gly Gly Ser Pro Gly Leu Ala Pro Arg Leu Leu Ala
 165 170 175
 Asn Ser Ser Met Leu Gly Glu Gly Gln Val Leu Arg Ser Pro Thr Asn
 180 185 190
 Arg Leu Leu Leu His Phe Gln Ser Pro Arg Val Pro Arg Gly Gly Gly


```

      195              200              205
Phe Arg Ile His Tyr Gln Ala Tyr Leu Leu Ser Cys Gly Phe Pro Pro
  210              215              220
Arg Pro Ala His Gly Asp Val Ser Val Thr Asp Leu His Pro Gly Gly
  225              230              235              240
Thr Ala Thr Phe His Cys Asp Ser Gly Tyr Gln Leu Gln Gly Glu Glu
      245              250              255
Thr Leu Ile Cys Leu Asn Gly Thr Arg Pro Ser Trp Asn Gly Glu Thr
      260              265              270
Pro Ser Cys Met Ala Ser Cys Gly Gly Thr Ile His Asn Ala Thr Leu
      275              280              285
Gly Arg Ile Val Ser Pro Glu Pro Gly Gly Ala Val Gly Pro Asn Leu
      290              295              300
Thr Cys Arg Trp Val Ile Glu Ala Ala Glu Gly Arg Arg Leu His Leu
  305              310              315              320
His Phe Glu Arg Val Ser Leu Asp Glu Asp Asn Asp Arg Leu Met Val
      325              330              335
Arg Ser Gly Gly Ser Pro Leu Ser Pro Val Ile Tyr Asp Ser Asp Met
      340              345              350
Asp Asp Val Pro Glu Arg Gly Leu Ile Ser Asp Ala Gln Ser Leu Tyr
      355              360              365
Val Glu Leu Leu Ser Glu Thr Pro Ala Asn Pro Leu Leu Leu Ser Leu
      370              375              380
Arg Phe Glu Ala Phe Glu Glu Asp Arg Cys Phe Ala Pro Phe Leu Ala
  385              390              395              400
His Gly Asn Val Thr Thr Thr Asp Pro Glu Tyr Arg Pro Gly Ala Leu
      405              410              415
Ala Thr Phe Ser Cys Leu Pro Gly Tyr Ala Leu Glu Pro Pro Gly Pro
      420              425              430
Pro Asn Ala Ile Glu Cys Val Asp Pro Thr Glu Pro His Trp Asn Asp
      435              440              445
Thr Glu Pro Ala Cys Lys Ala Met Cys Gly Gly Glu Leu Ser Glu Pro
      450              455              460
Ala Gly Val Val Leu Ser Pro Asp Trp Pro Gln Ser Tyr Ser Pro Gly
  465              470              475              480
Gln Asp Cys Val Trp Gly Val His Val Gln Glu Glu Lys Arg Ile Leu
      485              490              495
Leu Gln Val Glu Ile Leu Asn Val Arg Glu Gly Asp Met Leu Thr Leu
      500              505              510
Phe Asp Gly Asp Gly Pro Ser Ala Arg Val Leu Ala Gln Leu Arg Gly
      515              520              525
Pro Gln Pro Arg Arg Arg Leu Ser Ser Gly Pro Asp Leu Thr Leu
      530              535              540
Gln Phe Gln Ala Pro Pro Gly Pro Pro Asn Pro Gly Leu Gly Gln Gly
  545              550              555              560
Phe Val Leu His Phe Lys Glu Val Pro Arg Asn Asp Thr Cys Pro Glu
      565              570              575
Leu Pro Pro Pro Glu Trp Gly Trp Arg Thr Ala Ser His Gly Asp Leu
      580              585              590
Ile Arg Gly Thr Val Leu Thr Tyr Gln Cys Glu Pro Gly Tyr Glu Leu
      595              600              605
Leu Gly Ser Asp Ile Leu Thr Cys Gln Trp Asp Leu Ser Trp Ser Ala
      610              615              620
Ala Pro Pro Ala Cys Gln Lys Ile Met Thr Cys Ala Asp Pro Gly Glu

```

```

<400> 5267
ttcggcacga ggggcaccat gctgcaagga gagtatacct actctttggg ccaagtttat
60
gatcccacca caacctacct tggagctcct gtcttctatg ccccccagac ctatgcagca
120
attcccagtc ttcatttccc agccaccaa ggacatctca gcaacagagc cattatccga
180
gcccttctg ttagagaaat ttacatgaat gtacctgtag gggctgcggg agtgagagga
240
ctgggcggcc gtggctattt ggcatacaca ggctgggtc gaggatacca ggtcaaagga
300
gacaaaagag aagacaaact ctatgacatt ttacctggga tggagctcac cccaatgaat
360
cctgtcatat taaaacccca aggaattaaa ctcgctcccc agatattaga agagatttgt
420
cagaaaaata actggggaca gccagtgtac cagctgcact ctgctattgg acaagaccaa
480
agacagctat tcttgtacaa aataactatt cctgctctag ccagccagaa tcttgcaatc
540

```

caccctttca cacctccaaa gctgagtgcc tttgtggatg aagcaaagac gtatgcagcc
 600
 gaatacaccc tgcagaccct gggcatcccc actgatggag gcgatggcac catggctact
 660
 gctgctgctg ctgctactgc tttcccagga tatgctgtcc ctaatgcaac tgcacccgtg
 720
 tctgcagccc agctcaagca agcggtaacc cttggacaag acttagcagc atatacaacc
 780
 tatgaggtct acccaacttt tgcagtgact gcccaggggg atggatatgg caccttctga
 840
 agatgctttt ttaaatttaa gaataagaca cacaaaactc tatta
 885

<210> 5268

<211> 279

<212> PRT

<213> Homo sapiens

<400> 5268

Phe	Gly	Thr	Arg	Gly	Thr	Met	Leu	Gln	Gly	Glu	Tyr	Thr	Tyr	Ser	Leu
1				5					10					15	
Gly	Gln	Val	Tyr	Asp	Pro	Thr	Thr	Thr	Tyr	Leu	Gly	Ala	Pro	Val	Phe
			20					25					30		
Tyr	Ala	Pro	Gln	Thr	Tyr	Ala	Ala	Ile	Pro	Ser	Leu	His	Phe	Pro	Ala
		35					40					45			
Thr	Lys	Gly	His	Leu	Ser	Asn	Arg	Ala	Ile	Ile	Arg	Ala	Pro	Ser	Val
	50					55					60				
Arg	Glu	Ile	Tyr	Met	Asn	Val	Pro	Val	Gly	Ala	Ala	Gly	Val	Arg	Gly
65					70					75				80	
Leu	Gly	Gly	Arg	Gly	Tyr	Leu	Ala	Tyr	Thr	Gly	Leu	Gly	Arg	Gly	Tyr
			85					90						95	
Gln	Val	Lys	Gly	Asp	Lys	Arg	Glu	Asp	Lys	Leu	Tyr	Asp	Ile	Leu	Pro
			100					105					110		
Gly	Met	Glu	Leu	Thr	Pro	Met	Asn	Pro	Val	Thr	Leu	Lys	Pro	Gln	Gly
		115					120					125			
Ile	Lys	Leu	Ala	Pro	Gln	Ile	Leu	Glu	Glu	Ile	Cys	Gln	Lys	Asn	Asn
	130					135					140				
Trp	Gly	Gln	Pro	Val	Tyr	Gln	Leu	His	Ser	Ala	Ile	Gly	Gln	Asp	Gln
145					150					155				160	
Arg	Gln	Leu	Phe	Leu	Tyr	Lys	Ile	Thr	Ile	Pro	Ala	Leu	Ala	Ser	Gln
			165					170						175	
Asn	Pro	Ala	Ile	His	Pro	Phe	Thr	Pro	Pro	Lys	Leu	Ser	Ala	Phe	Val
		180						185					190		
Asp	Glu	Ala	Lys	Thr	Tyr	Ala	Ala	Glu	Tyr	Thr	Leu	Gln	Thr	Leu	Gly
	195						200					205			
Ile	Pro	Thr	Asp	Gly	Gly	Asp	Gly	Thr	Met	Ala	Thr	Ala	Ala	Ala	Ala
	210					215					220				
Ala	Thr	Ala	Phe	Pro	Gly	Tyr	Ala	Val	Pro	Asn	Ala	Thr	Ala	Pro	Val
225					230					235				240	
Ser	Ala	Ala	Gln	Leu	Lys	Gln	Ala	Val	Thr	Leu	Gly	Gln	Asp	Leu	Ala
			245					250						255	
Ala	Tyr	Thr	Thr	Tyr	Glu	Val	Tyr	Pro	Thr	Phe	Ala	Val	Thr	Ala	Arg
		260						265					270		
Gly	Asp	Gly	Tyr	Gly	Thr	Phe									

275

<210> 5269
<211> 1177
<212> DNA
<213> Homo sapiens

<400> 5269
nngctttctc cagtggggat ttaagactta caggatttcc tcttatggaa tagttcctag
60
tctactagct caagtagtca ggagaataat tctgccc aaa gcagtctgct tccttccatg
120
aatgaacagt cacagaagac acaaaatata tccagctttg attctgagct gtttctagaa
180
gaactggatg aattgcctcc attgtctcca atgcagccaa tttcagagga agaggctatt
240
cagattattg cagaccctcc attgccacca gcttcattca cacttcgaga ctatgtggat
300
cattctgaga ctctgcagaa gttggttctt ctaggcgtgg atttgtccaa gatagaaaaa
360
catccagaag cagcaaacct ccttctgaga ctggattttg aaaaagacat taagcaaatg
420
cttctgtttc ttaaagatgt gggatatagag gataaccaac tgggagcatt cctgacaaaa
480
aatcatgcaa ttttctctga agaccttgaa aatctgaaga ccagggtggc ttatctgcat
540
tcaaaaaatt tcagtaaagc agatgttgca cagatgggtca gaaaagcacc atttttgctg
600
aacttttcag tggaaagact ggataacaga ttgggatttt ttcagaaaga acttgaactt
660
agtgtgaaga agactagaga tctggtagtt cgtctcccaa ggctgctaac tggaagtctg
720
gaaccctgta aagaaaatat gaaggtttat cgtcttgaac ttggttttaa acataacgaa
780
attcaacata tgatcaccag aatcccaaag atgttaactg caaataaaat gaaacttacc
840
gagacgtttg attttgtgca caatgtgatg agcattcccc accacatcat tgtcaagttc
900
ccacaggtat ttaatacaag gctgtttaag gtcaaagaaa gacacttggt tcttacctat
960
ttaggaagag cacagtatga tccagcaaaa cctaactaca tctctttgga caaactagta
1020
tctattcctg atgaaatatt ttgtgaagag attgccaaag catcagtaca ggactttgaa
1080
aaattcttaa aaacgcttta gatttttatg tatgttaaaa tgcagtattg taaagtgaat
1140
atatatatga ataaatgaat atatttttaa aaaaaaa
1177

<210> 5270
<211> 327
<212> PRT
<213> Homo sapiens

<400> 5270

```

Met Asn Glu Gln Ser Gln Lys Thr Gln Asn Ile Ser Ser Phe Asp Ser
 1          5          10          15
Glu Leu Phe Leu Glu Glu Leu Asp Glu Leu Pro Pro Leu Ser Pro Met
          20          25          30
Gln Pro Ile Ser Glu Glu Glu Ala Ile Gln Ile Ile Ala Asp Pro Pro
          35          40          45
Leu Pro Pro Ala Ser Phe Thr Leu Arg Asp Tyr Val Asp His Ser Glu
          50          55          60
Thr Leu Gln Lys Leu Val Leu Leu Gly Val Asp Leu Ser Lys Ile Glu
65          70          75          80
Lys His Pro Glu Ala Ala Asn Leu Leu Leu Arg Leu Asp Phe Glu Lys
          85          90          95
Asp Ile Lys Gln Met Leu Leu Phe Leu Lys Asp Val Gly Ile Glu Asp
          100          105          110
Asn Gln Leu Gly Ala Phe Leu Thr Lys Asn His Ala Ile Phe Ser Glu
          115          120          125
Asp Leu Glu Asn Leu Lys Thr Arg Val Ala Tyr Leu His Ser Lys Asn
          130          135          140
Phe Ser Lys Ala Asp Val Ala Gln Met Val Arg Lys Ala Pro Phe Leu
          145          150          155          160
Leu Asn Phe Ser Val Glu Arg Leu Asp Asn Arg Leu Gly Phe Phe Gln
          165          170          175
Lys Glu Leu Glu Leu Ser Val Lys Lys Thr Arg Asp Leu Val Val Arg
          180          185          190
Leu Pro Arg Leu Leu Thr Gly Ser Leu Glu Pro Val Lys Glu Asn Met
          195          200          205
Lys Val Tyr Arg Leu Glu Leu Gly Phe Lys His Asn Glu Ile Gln His
          210          215          220
Met Ile Thr Arg Ile Pro Lys Met Leu Thr Ala Asn Lys Met Lys Leu
          225          230          235          240
Thr Glu Thr Phe Asp Phe Val His Asn Val Met Ser Ile Pro His His
          245          250          255
Ile Ile Val Lys Phe Pro Gln Val Phe Asn Thr Arg Leu Phe Lys Val
          260          265          270
Lys Glu Arg His Leu Phe Leu Thr Tyr Leu Gly Arg Ala Gln Tyr Asp
          275          280          285
Pro Ala Lys Pro Asn Tyr Ile Ser Leu Asp Lys Leu Val Ser Ile Pro
          290          295          300
Asp Glu Ile Phe Cys Glu Glu Ile Ala Lys Ala Ser Val Gln Asp Phe
          305          310          315          320
Glu Lys Phe Leu Lys Thr Leu
          325

```

<210> 5271

<211> 1185

<212> DNA

<213> Homo sapiens

<400> 5271

```

nagatctgcg gtctgggggc tgggtgaaag atggcgggcc tcactaccct gtttaagtac
60
atagatgaaa atcaggatcg ctacattaag cctgttcaac tgcagcagcc acagagggtg
120

```

agcctggaat gtggcaacgt tacgggagcc tcttctccct caaggacacc ttttcagaat
 180
 ccctcggttg ttcttgtcca caaacagaaa ctcgcaaaat ggggtggctat ccagagtgtg
 240
 tctgcgtggc cggagaagag aggcgaaatc aggaggatga tggaaagttgc tgctgcagat
 300
 gttaagcagt tggggggctc tgtggaactg gtggatatcg gaaaacaaaa gctccctgat
 360
 ggctcggaga tcccgtctcc tctattctg ctcggcaggc tgggctccga cccacagaag
 420
 aagaccgtgt gcatttacgg gcacctggat gtgcagcctg cagccctgga ggacggctgg
 480
 gacagcgagc ccttcaccct ggtggagcga gacggcaagc tgtatgggag aggttcgact
 540
 gatgataagg gcccggtggc cggttgata aacgccctgg aagcgatatca gaaaacaggc
 600
 caggagattc ctgtcaacgt ccgattctgc ctgaaggca tggaggagtc aggctctgag
 660
 ggcctagacg agctgatttt tgcccgaaa gacacattct ttaaggatgt ggactatgtc
 720
 tgcatttctg acaattactg gctgggaaa aagaagccct gcacaccta cggcctcagg
 780
 ggcatttgct actttttcat cgaggaggag tgcagcaaca aagacctcca ttctgggggtg
 840
 tacgggggct cgggtgcatga ggccatgact gatctcattt tgctgatggg ctctttgggtg
 900
 gacaagaggg ggaacatcct gatccccggc attaacgagg ccgtggccgc cgtcacggaa
 960
 gaggagcaca agctgtacga cgacatcgac tttagacatag aggagtttgc caaggatgtg
 1020
 ggggcgcgaga tctctctgca cagccacaag aaagacatcc tcatgcaccg atggcggtac
 1080
 ccgtctctgt cctccatgg catcgaaggc gccttctctg ggtctggggc caagaccgtg
 1140
 attcccaaaa aggtggttgg caagttctcc atcaggctcg tgccg
 1185

<210> 5272

<211> 385

<212> PRT

<213> Homo sapiens

<400> 5272

Met	Ala	Ala	Leu	Thr	Thr	Leu	Phe	Lys	Tyr	Ile	Asp	Glu	Asn	Gln	Asp
1				5					10					15	
Arg	Tyr	Ile	Lys	Pro	Val	Gln	Leu	Gln	Gln	Pro	Gln	Arg	Val	Ser	Leu
			20					25					30		
Glu	Cys	Gly	Asn	Val	Thr	Gly	Ala	Ser	Ser	Pro	Ser	Arg	Thr	Pro	Phe
		35					40					45			
Gln	Asn	Pro	Ser	Leu	Leu	Leu	Val	His	Lys	Gln	Lys	Leu	Ala	Lys	Trp
		50				55				60					
Val	Ala	Ile	Gln	Ser	Val	Ser	Ala	Trp	Pro	Glu	Lys	Arg	Gly	Glu	Ile
65					70					75				80	
Arg	Arg	Met	Met	Glu	Val	Ala	Ala	Ala	Asp	Val	Lys	Gln	Leu	Gly	Gly

85 90 95
 Ser Val Glu Leu Val Asp Ile Gly Lys Gln Lys Leu Pro Asp Gly Ser
 100 105 110
 Glu Ile Pro Leu Pro Pro Ile Leu Leu Gly Arg Leu Gly Ser Asp Pro
 115 120 125
 Gln Lys Lys Thr Val Cys Ile Tyr Gly His Leu Asp Val Gln Pro Ala
 130 135 140
 Ala Leu Glu Asp Gly Trp Asp Ser Glu Pro Phe Thr Leu Val Glu Arg
 145 150 155 160
 Asp Gly Lys Leu Tyr Gly Arg Gly Ser Thr Asp Asp Lys Gly Pro Val
 165 170 175
 Ala Gly Trp Ile Asn Ala Leu Glu Ala Tyr Gln Lys Thr Gly Gln Glu
 180 185 190
 Ile Pro Val Asn Val Arg Phe Cys Leu Glu Gly Met Glu Glu Ser Gly
 195 200 205
 Ser Glu Gly Leu Asp Glu Leu Ile Phe Ala Arg Lys Asp Thr Phe Phe
 210 215 220
 Lys Asp Val Asp Tyr Val Cys Ile Ser Asp Asn Tyr Trp Leu Gly Lys
 225 230 235 240
 Lys Lys Pro Cys Ile Thr Tyr Gly Leu Arg Gly Ile Cys Tyr Phe Phe
 245 250 255
 Ile Glu Val Glu Cys Ser Asn Lys Asp Leu His Ser Gly Val Tyr Gly
 260 265 270
 Gly Ser Val His Glu Ala Met Thr Asp Leu Ile Leu Leu Met Gly Ser
 275 280 285
 Leu Val Asp Lys Arg Gly Asn Ile Leu Ile Pro Gly Ile Asn Glu Ala
 290 295 300
 Val Ala Ala Val Thr Glu Glu His Lys Leu Tyr Asp Asp Ile Asp
 305 310 315 320
 Phe Asp Ile Glu Glu Phe Ala Lys Asp Val Gly Ala Gln Ile Leu Leu
 325 330 335
 His Ser His Lys Lys Asp Ile Leu Met His Arg Trp Arg Tyr Pro Ser
 340 345 350
 Leu Ser Leu His Gly Ile Glu Gly Ala Phe Ser Gly Ser Gly Ala Lys
 355 360 365
 Thr Val Ile Pro Lys Lys Val Val Gly Lys Phe Ser Ile Arg Leu Val
 370 375 380
 Pro
 385

<210> 5273

<211> 4580

<212> DNA

<213> Homo sapiens

<400> 5273

ccatggggta ggcgataact agcgttgggg agcggctata accttcccgg cagtggacga
 60
 gcacccggcc tgtaatccca gctacttggg aggctgaggc gggaggctga ggcaggagaa
 120
 tcgcttgaac ccgggaggtg gaggttgccg tgagccaaga tcgcccatt gctcttcagc
 180
 ctgggcaaca agagtgaac tccatctttc ttttgagcca aagcctgggc aatgaagtcg
 240

gcagcccttt caaagtaagc gctgaggttg aactcctgtg tgtcgttggc cttgatgccc
300
aggtatgtga tgccggagtc cttgtagaag ttggcattgg tgttgacgtg catgaaggac
360
ctgccctcag ccgcgttcag cacatgggtg atgcctagtt tctgcagctt ggggatgtcg
420
ggctcgttcg agctctcggg gcaggatctc aacgacctgc tctcggacgg cagcggctgc
480
tacagcctcc cgagccagcc ctgcaacgag gtcaccccg gcgacctacgt gggcaacgcg
540
tctgtggctc aggacatccc caagctgcag aaactaggca tcacccatgt gctgaacgcg
600
gctgagggca ggtccttcat gcacgtcaac accaatgcca acttctacaa ggactccggc
660
atcacatacc tgggcatcaa ggccaacgac acacaggagt tcaacctcag cgcttacttt
720
gaaagggctg ccgacttcat tgaccaggct ttggctcaaa agaattggcg ggtgctcgtc
780
cactgccggg aaggttatag ccgctcccca acgctagtta tcgcctacct catgatgcgg
840
cagaagatgg acgtcaagtc tgccctgagc atcgtgaggc agaaccgtga gatcgcccc
900
aacgatggct tcctggccca gctctgccag ctcaatgaca gactagccaa ggaggggaag
960
ttgaaacctt agggcacccc caccgcctct gctcgagagg tccgtggggg aggcctggg
1020
caaaggtgtc ccgagctgcc atgttttaga aacacactgt accctgctcc cagcatcaca
1080
aggcacttgt ctacaagtgt gtcccaacac agtcctgggc cactttcccc accctgggga
1140
gcacataaag aagcttgcca aggggggctg ccttgctccc cagttgtcct gtttctgtaa
1200
cttatgatgt cttttccctg agatgggggc tcagaggggg aaggcctgtg gcctgcatgc
1260
ttcccgatgg ccacggcag gaggtgtgtg gaagtgtgag gcctaagatg ctcacagagg
1320
tccctcatga cctcccttcc ccaactcccg aatcctctct tgagtgtgga cctcaacacc
1380
ttgagcccta gtaaaggaac tatgcaaatg caggccactc tccccaccac gtctgtgccc
1440
cgactgtcc ccacagcctt ccacaccctg tgcataggca gccctctcac gtcttgaggt
1500
ccgaagctgg ggtgggggtg tccgtcagtt attagtggat ggagattccc acagcaaggc
1560
tgcatttgaa tgatttcctt aggatgaatg gtccctacac aaagaggcct tgtgggcaaa
1620
cctggagaac cctcctaaat ccatagagtt ttcaaaatgt gaatctttgg aagccttgag
1680
ttcagaatct gctgctctgg aatatttccc ttcatctta tctcagtcac ttcgtttttg
1740
agaagagtga tgccttgggc atgctttttt ttttctttt ttagaaaaca gggagttgaa
1800
gtccaaccta tttaaaaacc ccaccatttg gagaattaca aggttttgt cctgaattgt
1860

agtgttggca agcccaagcc actcgtgcta actgcttttt gtctcggttg ctattccaag
1920
aacagaagga ggaagttggc caattacagc gtgtgtgcat ggatgtgtgt ggggggcgtg
1980
cctctcagaa acgcggccag aagacaagca ggggaagtga aggtcccagg cacacaccct
2040
gcccattgca ggtggctctt acagctctct ggtgccagca cgggatccct gaagtgactc
2100
agccaggcag acatgagaca tggcggagtg tccaaatgga tcctttattg gtggtagagc
2160
aaaaaaaccc aaacacgata aacctttcaa aagactttct aaggatgata ttggaatgca
2220
ccagccctca catgtgtatg cacatttgcc agaataaag agttttgttt taaatacagt
2280
cttgtagga ttttacgtta ttgttattat ggaaagtgat tgtgatgcta tttatcttca
2340
gggtcactct gggcaaagag aaggtcctca gccatgcccc cagcaccttg cacataggtg
2400
tctgataaaa gttaagaaa ttaaacactt tttagcacc aaatatatat agggcattgt
2460
tctgggtgggt gtgtcacgct cccagaagac tgaatttatg gtaggatcac tcgcaaggcc
2520
ttgtgaagga gtcttaccta aaacaaaaga aatatcaggg acttttgttg actatttaca
2580
actcagtttt acatttaaatt tcaggcagtg ttaatatgcc aaggtaggga atgtgccttt
2640
ttcagagttg gccaggagct cctggctggg acacggagag gcaggtgttg gcgtaaggcc
2700
tcactcccgg ctgtgaaggt ctctgatcac acagaagcag ccctgcccag cctggtcatt
2760
tgctgtccgc ttttctctgt gaccacagca gccctgaaca accagtatgt gtcttcttct
2820
ccagatagtg aaaaagggtg ccagataaac ccacctaagt gaaatggcca tcctctaaac
2880
tgggtacctc actgcacagc ttctaggtag ccttccaact taatctaact tgagcctcac
2940
agtaaccctg taaagttagt agagcttggt cttgtattgt gacctttttt aaaaaaagg
3000
aactgagggt cagaatgatt aagggcctgg ccccagggt tgtccagctc cataagggtg
3060
agctgggcaa gatatttgggt ttgctgctcc ctgaagctgg attctttcat acgatactct
3120
ttctcaagaa ggggctccc tgggatctcc aggtgtactg cacttaccct caatccagcc
3180
ccggagaagc aagtgaagag ggtgggtccc tcataggcta gaatgtgcag ctctttctcc
3240
aggtgggatg tagcacccca aagtagagct ttctgctctg ctctggaaa aggctagggg
3300
gctggggctg gggctcccct cccatgacca ggcagtggc accccatggg acaggcacag
3360
ctacttacgc gaacacagca ggttgggtgtg gctggctaac taggacctct cgaaagtctc
3420
tgtgggggca tgaggagaa aaggccattg ggagaattac tgcctttact ttgggactac
3480

ttttatgctg ataacttggg atttcttgat agtccttcac ccctgaaacc ccgtatttac
 3540
 ttaacaagat ttagctctta gttcttcaag taaaattaaa gtctcttggt taagagccaa
 3600
 cacatgcccc gctgcggatg ggagctgttc ctggacagcc ttctactgcc tgggaagtga
 3660
 tggaacagga actcaggggtg cccttaccac ctccccagac ctgttccctt tctttgactg
 3720
 acagagcacc atccaggcaa aattagagcg ccaaattggtt ttcttctcaa tcttaaagca
 3780
 gtataccttt ccacaggctc gtctgtgtcc ctgccactct gagttatcca gaaaccacca
 3840
 cctacaaatg aggggactca tctagaagac ctctaaggtc cccttttggc tctgaggggt
 3900
 ctctaataat cccacttgg aattcagcac cgcaaggaaa ttatgggtat gtgagccata
 3960
 atatgatggc cagcaggtgg cgctgccttc caccatggt gatggatggt ttggaaaggg
 4020
 aatgttgggt ccttttgtgc cacaagttaa gatgctactg ttttaaagga aaaaaaaaaa
 4080
 aaaaaagtac tgatcttcaa tatgaagaca tgagcttttc tcgcaggaaa ttttctttt
 4140
 cacagaactg gtgtcaggaa tctactgaagg gctaaccgtg atagtccttg caagtaagtc
 4200
 aaggttttat cctgattgga aatagaagac atttccggtt gagagaacag attcgttgga
 4260
 agcttaactt ttgttgctc ttaacgccac caaatttttag ggtaatttga ttatgaaaga
 4320
 gtgaattttt ctggacagaa aaggagagc taccaaattg ttttttctt tttaaaagga
 4380
 agtttaattg cgttgtatc acaaatcagt gttaaaacac cagaacttta gccaaaataa
 4440
 atgtcttaca ttacaaaggt aaaaaaaaaa aaaaaaaaaa cccaaaaatt ttttataccg
 4500
 gaaatttgaa aaaaccccc atttcccccc aacagtgacc cggaacactc ctcattctat
 4560
 taattacacc atttcccat
 4580

<210> 5274

<211> 185

<212> PRT

<213> Homo sapiens

<400> 5274

Met	Ser	Gly	Ser	Phe	Glu	Leu	Ser	Val	Gln	Asp	Leu	Asn	Asp	Leu	Leu
1				5					10					15	
Ser	Asp	Gly	Ser	Gly	Cys	Tyr	Ser	Leu	Pro	Ser	Gln	Pro	Cys	Asn	Glu
			20					25					30		
Val	Thr	Pro	Arg	Ile	Tyr	Val	Gly	Asn	Ala	Ser	Val	Ala	Gln	Asp	Ile
			35				40					45			
Pro	Lys	Leu	Gln	Lys	Leu	Gly	Ile	Thr	His	Val	Leu	Asn	Ala	Ala	Glu
			50			55					60				
Gly	Arg	Ser	Phe	Met	His	Val	Asn	Thr	Asn	Ala	Asn	Phe	Tyr	Lys	Asp

```

65          70          75          80
Ser Gly Ile Thr Tyr Leu Gly Ile Lys Ala Asn Asp Thr Gln Glu Phe
          85          90          95
Asn Leu Ser Ala Tyr Phe Glu Arg Ala Ala Asp Phe Ile Asp Gln Ala
          100          105          110
Leu Ala Gln Lys Asn Gly Arg Val Leu Val His Cys Arg Glu Gly Tyr
          115          120          125
Ser Arg Ser Pro Thr Leu Val Ile Ala Tyr Leu Met Met Arg Gln Lys
          130          135          140
Met Asp Val Lys Ser Ala Leu Ser Ile Val Arg Gln Asn Arg Glu Ile
          145          150          155          160
Gly Pro Asn Asp Gly Phe Leu Ala Gln Leu Cys Gln Leu Asn Asp Arg
          165          170          175
Leu Ala Lys Glu Gly Lys Leu Lys Pro
          180          185

```

<210> 5275

<211> 810

<212> DNA

<213> Homo sapiens

<400> 5275

```

nntctcgctc aggcctcggtt ttaccccgga gtctattcga agggggctgc tacgtcagcg
60
cgtctcagcg taagacggcg ctattccgct gtaacagctt ccggcggggc ctggatgttg
120
atgtcctgca tctaacgcgg tgtgaccccc gaagccgagc gagctccgga ggaatttcag
180
tatctgctac ggtaacttca tcagcccgcc aagatggcga tgcaagcggc caagagggcg
240
aacattcgac ttccacctga agtaaactcg atattgtata taagaaattt gccatacaaa
300
atcacagctg aagaaatgta tgatatattt gggaaatatg gacctattcg tcaaatacaga
360
gtggggaaca cacctgaaac tagaggaaca gcttatgttg tctatgagga catctttgat
420
gccaagaatg catgtgatca cctatcgagg ttcaatgttt gtaacagata ccttgtgggt
480
ttgtactata atgccaacag ggcatttcag aagatggaca caaagaagaa ggaggaacag
540
ttgaagcttc tcaaggagaa atatggcatc aacacagatc caccaaaata aatgttttct
600
acattttcat ttggactaaa tcccacgaat gacaactacc accttttttt cctttttaat
660
taatactaaa tattgtgatt tcttatttga ggttcaaaat gacctgcttg aaactttgat
720
acatattgga atacattatg ttaataaact tgtagctttt tgtgaaacaa aaaaaaaaaag
780
tcgacgcggc cggcaattta gtagtagtag
810

```

<210> 5276

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5276

```

Met Ala Met Gln Ala Ala Lys Arg Ala Asn Ile Arg Leu Pro Pro Glu
 1           5           10           15
Val Asn Arg Ile Leu Tyr Ile Arg Asn Leu Pro Tyr Lys Ile Thr Ala
      20           25           30
Glu Glu Met Tyr Asp Ile Phe Gly Lys Tyr Gly Pro Ile Arg Gln Ile
      35           40           45
Arg Val Gly Asn Thr Pro Glu Thr Arg Gly Thr Ala Tyr Val Val Tyr
      50           55           60
Glu Asp Ile Phe Asp Ala Lys Asn Ala Cys Asp His Leu Ser Gly Phe
65           70           75           80
Asn Val Cys Asn Arg Tyr Leu Val Val Leu Tyr Tyr Asn Ala Asn Arg
      85           90           95
Ala Phe Gln Lys Met Asp Thr Lys Lys Lys Glu Glu Gln Leu Lys Leu
      100          105          110
Leu Lys Glu Lys Tyr Gly Ile Asn Thr Asp Pro Pro Lys
      115          120          125

```

<210> 5277

<211> 612

<212> DNA

<213> Homo sapiens

<400> 5277

```

atctacgact tcatggatga cccgaagccc cacaagaagc tgggcccgcga ggccctggctg
60
gtggcgggcca tcacggccac ggagctgctc atcgtgggtga agtacgaccc ccacacgctc
120
accctgtccc tgcccttcta catctcccag tgctggaccc tcggctccgt cctggcgctc
180
acctggaccg tctggcgctt cttcctgcgg gacatcacat tgaggtacaa ggagaccg
240
tggcagaagt ggcagaacaa ggatgaccag ggcagcaccg tcggcaacgg ggaccagcac
300
ccactggggc tggacgaaga cctgctgggg cctgggggtgg ccgagggcga gggagcacca
360
actccaaact gacctgggccc gtggctgcct cgtgagcctc ccagagccca ggcctccgtg
420
gcctcctcct gtgtgagtc caccaggagc cacgtgcccg gccttgccct caagggtttt
480
tgcttttctc ctgtgcacct ggcgaggctg aaggcgaggg gtggaggagg cccagcaca
540
gcctcatctc catgtgtaca cgtgtgtacg tgtgtatgcg tgtgtgtacg tgtgtatgcg
600
tgtgtgtacg tg
612

```

<210> 5278

<211> 123

<212> PRT

<213> Homo sapiens

<400> 5278

Ile Tyr Asp Phe Met Asp Asp Pro Lys Pro His Lys Lys Leu Gly Pro
 1 5 10 15
 Gln Ala Trp Leu Val Ala Ala Ile Thr Ala Thr Glu Leu Leu Ile Val
 20 25 30
 Val Lys Tyr Asp Pro His Thr Leu Thr Leu Ser Leu Pro Phe Tyr Ile
 35 40 45
 Ser Gln Cys Trp Thr Leu Gly Ser Val Leu Ala Leu Thr Trp Thr Val
 50 55 60
 Trp Arg Phe Phe Leu Arg Asp Ile Thr Leu Arg Tyr Lys Glu Thr Arg
 65 70 75 80
 Trp Gln Lys Trp Gln Asn Lys Asp Asp Gln Gly Ser Thr Val Gly Asn
 85 90 95
 Gly Asp Gln His Pro Leu Gly Leu Asp Glu Asp Leu Leu Gly Pro Gly
 100 105 110
 Val Ala Glu Gly Glu Gly Ala Pro Thr Pro Asn
 115 120

<210> 5279

<211> 1225

<212> DNA

<213> Homo sapiens

<400> 5279

atcaatggag cagaggagaa aattctagaa gatttccgaa aaaccacag ccctgatgac
 60
 cctgactttc agctgcaggc catgattcag gcagcaggaa agcttggtt gattgataaa
 120
 ctactcccta agctgattgc aggtggccac aaagtactca tcttctcca gatggcgcc
 180
 tgccctcgaca tcctagaaga ttatttaatc cagagaagat acacctatga acgtattgat
 240
 gggcgagtac ggggaaacct gcgccaggct gccatcgacc gcttcagcaa gcctgactca
 300
 gaccgctttg tcttcttact gtgcaccaga gcgggaggcc tggggatcaa tctcacagct
 360
 gctgatacct gcatcatatt tgattctgac tggaaccac aaaatgactt gcaggctcag
 420
 gcccgatgtc accgcatagg ccagagcaaa gctgtgaagg tgtatcgct catcactcga
 480
 aattcctacg agcgcgagat gtttgacaag gccagcctaa agctggggct ggacaaggct
 540
 gttcttcaga catcaaccga aaggcgga ccaatgggta cagcactctc aaaaatggag
 600
 gtggaggacc tactccgaa aggtgcttat ggagccttaa tggatgaaga agatgaaggc
 660
 tccaagtctt gtgaagaaga catagaccag attctgcaga ggcgaacgca caccatcacc
 720
 atccagtctg aggggaaagg gtccactttt gccaaaggcta gctttgtggc ttcaggaaac
 780
 agaacagata tttccttaga tgatcctaac ttttggcaga aatgggctaa aatagctgaa
 840
 ctagacactg aagcaaagaa tgaaaaggaa agcttagtga tcgaccgacc tcgcgtgaga
 900

aagcagacca aacactacaa ctcgtttgag gaagacgagc tcatggagtt ttcagagtta
 960
 gacagcgact cagacgaaag gcccacgaga tccaggcgcc tcaatgacaa agccaggcgc
 1020
 tacctccgag cggagtgcct cgggtagag aagaacctgc tcatctttgg ctggggccgg
 1080
 tggaaggaca tcctgactca tggccgattc aagtggcatc tgaacgagaa ggacatggag
 1140
 atgatttgcc gtgccctcct ggtgtactgt gtcaagcatt ataaggggga cgagaagatc
 1200
 aagagtttca tttgggaact gatca
 1225

<210> 5280

<211> 408

<212> PRT

<213> Homo sapiens

<400> 5280

Ile	Asn	Gly	Ala	Glu	Glu	Lys	Ile	Leu	Glu	Asp	Phe	Arg	Lys	Thr	His
1				5					10					15	
Ser	Pro	Asp	Ala	Pro	Asp	Phe	Gln	Leu	Gln	Ala	Met	Ile	Gln	Ala	Ala
			20					25					30		
Gly	Lys	Leu	Val	Leu	Ile	Asp	Lys	Leu	Leu	Pro	Lys	Leu	Ile	Ala	Gly
			35					40					45		
Gly	His	Lys	Val	Leu	Ile	Phe	Ser	Gln	Met	Val	Arg	Cys	Leu	Asp	Ile
	50					55				60					
Leu	Glu	Asp	Tyr	Leu	Ile	Gln	Arg	Arg	Tyr	Thr	Tyr	Glu	Arg	Ile	Asp
65					70					75				80	
Gly	Arg	Val	Arg	Gly	Asn	Leu	Arg	Gln	Ala	Ala	Ile	Asp	Arg	Phe	Ser
			85					90					95		
Lys	Pro	Asp	Ser	Asp	Arg	Phe	Val	Phe	Leu	Leu	Cys	Thr	Arg	Ala	Gly
			100					105					110		
Gly	Leu	Gly	Ile	Asn	Leu	Thr	Ala	Ala	Asp	Thr	Cys	Ile	Ile	Phe	Asp
			115				120					125			
Ser	Asp	Trp	Asn	Pro	Gln	Asn	Asp	Leu	Gln	Ala	Gln	Ala	Arg	Cys	His
			130			135					140				
Arg	Ile	Gly	Gln	Ser	Lys	Ala	Val	Lys	Val	Tyr	Arg	Leu	Ile	Thr	Arg
145					150					155				160	
Asn	Ser	Tyr	Glu	Arg	Glu	Met	Phe	Asp	Lys	Ala	Ser	Leu	Lys	Leu	Gly
			165					170					175		
Leu	Asp	Lys	Ala	Val	Leu	Gln	Thr	Ser	Thr	Glu	Arg	Ala	Ala	Pro	Met
			180				185					190			
Gly	Thr	Ala	Leu	Ser	Lys	Met	Glu	Val	Glu	Asp	Leu	Leu	Arg	Lys	Gly
			195				200					205			
Ala	Tyr	Gly	Ala	Leu	Met	Asp	Glu	Glu	Asp	Glu	Gly	Ser	Lys	Phe	Cys
			210			215					220				
Glu	Glu	Asp	Ile	Asp	Gln	Ile	Leu	Gln	Arg	Arg	Thr	His	Thr	Ile	Thr
225					230					235				240	
Ile	Gln	Ser	Glu	Gly	Lys	Gly	Ser	Thr	Phe	Ala	Lys	Ala	Ser	Phe	Val
			245					250					255		
Ala	Ser	Gly	Asn	Arg	Thr	Asp	Ile	Ser	Leu	Asp	Asp	Pro	Asn	Phe	Trp
			260				265					270			
Gln	Lys	Trp	Ala	Lys	Ile	Ala	Glu	Leu	Asp	Thr	Glu	Ala	Lys	Asn	Glu

```

      275              280              285
Lys Glu Ser Leu Val Ile Asp Arg Pro Arg Val Arg Lys Gln Thr Lys
      290              295              300
His Tyr Asn Ser Phe Glu Glu Asp Glu Leu Met Glu Phe Ser Glu Leu
305              310              315              320
Asp Ser Asp Ser Asp Glu Arg Pro Thr Arg Ser Arg Arg Leu Asn Asp
      325              330              335
Lys Ala Arg Arg Tyr Leu Arg Ala Glu Cys Phe Arg Val Glu Lys Asn
      340              345              350
Leu Leu Ile Phe Gly Trp Gly Arg Trp Lys Asp Ile Leu Thr His Gly
      355              360              365
Arg Phe Lys Trp His Leu Asn Glu Lys Asp Met Glu Met Ile Cys Arg
      370              375              380
Ala Leu Leu Val Tyr Cys Val Lys His Tyr Lys Gly Asp Glu Lys Ile
385              390              395              400
Lys Ser Phe Ile Trp Glu Leu Ile
      405

```

<210> 5281

<211> 336

<212> DNA

<213> Homo sapiens

<400> 5281

```

tgatcaacaa tacttttcag agtctcttgg ggtgtgatga gttaagcttc ctactggatg
60
aaatgcaaac cgcccaaat aaataccagg agcttaagaa tatttgcagc tatagggtc
120
aggcattcct ggtactcaca ggtctgacag ccacagttgg agacacagct atttcttcag
180
aagagaaaac acaacgcacg tcattaatga gacatcacat gggacaatca ttgtccaaag
240
aagttgcaca tgtcctcacc aaacctggag cagatcacga ttgggaaaac ctagagaaag
300
acttgagatt gctcattaat ggggattatg aagaag
336

```

<210> 5282

<211> 91

<212> PRT

<213> Homo sapiens

<400> 5282

```

Met Gln Thr Ala Gln Asn Lys Tyr Gln Glu Leu Lys Asn Ile Cys Ser
  1              5              10              15
Tyr Arg Ala Gln Ala Phe Leu Val Leu Thr Gly Leu Thr Ala Thr Val
      20              25              30
Gly Asp Thr Ala Ile Ser Ser Glu Glu Lys Thr Gln Arg Met Ser Leu
      35              40              45
Met Arg His His Met Gly Gln Ser Leu Ser Lys Glu Val Ala His Val
      50              55              60
Leu Thr Lys Pro Gly Ala Asp His Asp Trp Glu Asn Leu Glu Lys Asp
65              70              75              80
Leu Arg Leu Leu Ile Asn Gly Asp Tyr Glu Glu

```

85

90

<210> 5283
<211> 1989
<212> DNA
<213> Homo sapiens

<400> 5283
naggccgctt gggcgactt gccgggtcac cttgtcccgg aggagaaatg gcttccctga
60
ggcaagtgtgta acctacattc ccagcccacc agcctgacgc ccagccaggg agagagtacc
120
atggatggca tcattgaaca gaagagcatg ctgggtgcaca gtaaaatcag tgatgtctggc
180
aagaggaatg gtttaattaa caccagaaac ttgatggccg agagcagaga tggctctggtg
240
tctgtttacc cagcgcccca gtaccagagc caccgggtgg gggccagcac agtgccggcc
300
agcctggaca gcagcaggag tgagccgatg cagcagctgc tggaccccaa caccctgcag
360
cagtccgtgg agtcccgtca ccggcccac atcatcctct attcagaggg cgtgctgcgc
420
tcctgggggg acggtgtggc cgccgactgc tgcgagacca ccttcacga ggaccggtcg
480
cccaccaaag acagcctcga gtaccggat ggaagtcca ttgacctc agctgatgac
540
ataaaaaatc acaccctgtc ctacgatgtg gaggaggagg aggagtcca ggagctggag
600
agcgactact caagcgacac agagagttag gacaatttcc tcatgatgcc ccgcgggac
660
cacctgggcc tcagtgtctt ctccatgctc tgctgcttct ggcctctggg catcgagcc
720
ttctacttgt cccatgagac caacaaagcc gtggccaagg gggacttgca ccaggccagc
780
accagctccc ggcgggccct attcctggca gtgctgtcca tcaccattgg gactggcgctc
840
tatgtgggcg tggccgtggc cctcatcgcc tacctctcca agaacaacca cctgtgagct
900
tcctgcgaat ggagggggag caccggggc caggctctgtg tggacgtgga ggaagcaggc
960
ataccgcatg atgctgtaca gtacaaatga ttgccaaatg atgccacgaa gccctgggat
1020
ttcctacca tggatttatt ttgtttttat cctttaattt catgttcaca gcactgtgta
1080
gagcaccaga cagacgggca ctgctaattc ttccaaagga aagctccaaa gatcccagcc
1140
cgcaaggctg tctctggatg gattctggtg gatgaatggc aacgggctc tctgcagcct
1200
gccagtggcc agagtggcac cgcatagca atatacaaac agtccaaaaa agtggtttatt
1260
ttttatggaa tacggtgcaa taggcagagg acaagggaca catcactctt ctgtctgtgg
1320
ccctgctgga gtcctttgtg cccccggag tccacacgcc ttccctgcaa gacgagaatg
1380

gggctgggaa gaaagaggca acaccacggc tggcaggagc cccgctgcac tgctctgcag
 1440
 acccattggc ctgacctga gaagcagagc cagcaaagcc cgggacctgc ccctctttct
 1500
 ttcccttcac accaccccag cctcaggatg tcaagccacc tccggaacgt gtctacactc
 1560
 cacagctacc cgcagcaat acgcactctt gggacctcgc tgatctagga tggggaggca
 1620
 ggccaccgcc cctcccaaga ctctcaaga aagagccccg cggttgctcc ggaaactcga
 1680
 ggcaactgcag ctatgggcac tgcctcagcc taaagacaca ggggcgcctc ccaatcaccg
 1740
 cgctggcgga tgctcacccc gtcataagca gaaactagt atcctggaaa tgagatgggc
 1800
 cttactctgt cgactaaatg aatagctatt ttctgtcat tttttaagt gcaactcttg
 1860
 cttcatgctg cttaagttac cagatgaatg ctgagaaata agtaatcaca gacatttta
 1920
 taccatttca ttgctgtttt acgagtgttc attacttaac aaaaaattat cttttagctt
 1980
 ttctgctta
 1989

<210> 5284

<211> 258

<212> PRT

<213> Homo sapiens

<400> 5284

Met	Asp	Gly	Ile	Ile	Glu	Gln	Lys	Ser	Met	Leu	Val	His	Ser	Lys	Ile
1			5						10					15	
Ser	Asp	Ala	Gly	Lys	Arg	Asn	Gly	Leu	Ile	Asn	Thr	Arg	Asn	Leu	Met
		20					25						30		
Ala	Glu	Ser	Arg	Asp	Gly	Leu	Val	Ser	Val	Tyr	Pro	Ala	Pro	Gln	Tyr
		35				40						45			
Gln	Ser	His	Arg	Val	Gly	Ala	Ser	Thr	Val	Pro	Ala	Ser	Leu	Asp	Ser
	50				55					60					
Ser	Arg	Ser	Glu	Pro	Met	Gln	Gln	Leu	Leu	Asp	Pro	Asn	Thr	Leu	Gln
65				70					75					80	
Gln	Ser	Val	Glu	Ser	Arg	Tyr	Arg	Pro	Asn	Ile	Ile	Leu	Tyr	Ser	Glu
			85					90					95		
Gly	Val	Leu	Arg	Ser	Trp	Gly	Asp	Gly	Val	Ala	Ala	Asp	Cys	Cys	Glu
		100				105						110			
Thr	Thr	Phe	Ile	Glu	Asp	Arg	Ser	Pro	Thr	Lys	Asp	Ser	Leu	Glu	Tyr
		115				120						125			
Pro	Asp	Gly	Lys	Phe	Ile	Asp	Leu	Ser	Ala	Asp	Asp	Ile	Lys	Ile	His
	130				135					140					
Thr	Leu	Ser	Tyr	Asp	Val	Glu	Glu	Glu	Glu	Glu	Phe	Gln	Glu	Leu	Glu
145				150					155					160	
Ser	Asp	Tyr	Ser	Ser	Asp	Thr	Glu	Ser	Glu	Asp	Asn	Phe	Leu	Met	Met
			165					170					175		
Pro	Pro	Arg	Asp	His	Leu	Gly	Leu	Ser	Val	Phe	Ser	Met	Leu	Cys	Cys
		180					185						190		
Phe	Trp	Pro	Leu	Gly	Ile	Ala	Ala	Phe	Tyr	Leu	Ser	His	Glu	Thr	Asn

	195		200		205														
Lys	Ala	Val	Ala	Lys	Gly	Asp	Leu	His	Gln	Ala	Ser	Thr	Ser	Ser	Arg				
	210					215					220								
Arg	Ala	Leu	Phe	Leu	Ala	Val	Leu	Ser	Ile	Thr	Ile	Gly	Thr	Gly	Val				
225					230					235					240				
Tyr	Val	Gly	Val	Ala	Val	Ala	Leu	Ile	Ala	Tyr	Leu	Ser	Lys	Asn	Asn				
				245					250					255					

His Leu

<210> 5285

<211> 2155

<212> DNA

<213> Homo sapiens

<400> 5285

nnacgcgtgc agcaaagaat ggaggagtcg gaacccgaac ggaagcgggc tcgcaccgac
60
gaggtgcctg ccggaggaag ccgctccgag gcggaagatg aggacgacga ggactacgtg
120
ccctatgtgc cgttacggca gcgcggcgag ctactgctcc agaagctgct gcagcgaaga
180
cgcaagggag ctgcggagga agagcagcag gacagcggta gtgaaccccg gggagatgag
240
gacgacatcc cgctaggccc tcagtccaac gtcagcctcc tggatcagca ccagcacctt
300
aaagagaagg ctgaagcgcg caaagagtct gccaaaggaga agcagctgaa ggaagaagag
360
aagatcctgg agagtgttgc cgagggccga gcattgatgt cagtgaagga gatggctaag
420
ggcattacgt atgatgaccc catcaaaacc agctggactc caccocgtta tgttctgagc
480
atgtctgaag agcgacatga gcgcgtgcgg aagaaatacc acatcctggt ggagggagac
540
ggtatcccac caccatcaa gagcttcaag gaaatgaagt ttcttcagc catcctgaga
600
ggcctgaaga agaaaggcat tcaccaccca acacccattc agatccaggg catccccacc
660
attctatctg gccgtgacat gataggcatc gctttcacgg gttcaggcaa gacactggtg
720
ttcacgttgc ccgtcatcat gttctgcctg gaacaagaga agaggttacc cttctcaaag
780
cgcgaggggc cctatggact catcatctgc ccctcgcggg agctggcccg gcagacccat
840
ggcatcctgg agtactactg ccgcctgctg caggaggaca gctcaccact cctgcgctgc
900
gccctctgca ttgggggcat gtccgtgaaa gagcagatgg agaccatccg acacggtgta
960
cacatgatgg tggccacccc ggggcgcctc atggatttgc tgcagaagaa gatggtcagc
1020
ctagacatct gtcgctacct ggccctggac gaggctgacc gcatgatcga catgggcttc
1080
gagggtgaca tccgtaccat cttctcctac ttcaagggcc agcgacagac cctgctcttc
1140

agtgccacca tgccgaagaa gattcagaac ttgctaaga gtgcccttgt aaagcctgtg
 1200
 accatcaatg tggggcggtgc tggggctgcc agcctggatg tcatccagga ggtagaatat
 1260
 gtgaaggagg aggccaagat ggtgtacctg ctgagtgcc tgcagaagac acccccgctt
 1320
 gtactcatct ttgcagagaa gaaggcagac gtggacgcca tccacgagta cctgctgctc
 1380
 aaggggggttg agggcgtagc catccatggg ggcaaagacc aggaggaacg gactaaggcc
 1440
 atcgaggcat tccgggaggg caagaaggat gtcctagtag ccacagacgt tgcctccaag
 1500
 ggcttgact tccctgccat ccagcacgtc atcaattatg acatgccaga ggagattgag
 1560
 aactatgtac accggattgg ccgcaccggg cgctcgggaa acacaggcat cgccactacc
 1620
 ttcataca aagcgtgtga tgagtcagt ctgatggacc tcaaagcgt gctgctagaa
 1680
 gccaagcaga aggtgccgcc cgtgctgcag gtgctgcatt gcggggatga gtccatgctg
 1740
 gacattggag gagagcgcg ctgtgccttc tgcgggggccc tgggtcatcg gatcactgac
 1800
 tgcccaaac tcgaggctat gcagaccaag caggtcagca acatcggtcg caaggactac
 1860
 ctggcccaca gctccatgga cttctgagcc gacagtcttc cttctctctc aagaggcctc
 1920
 agtccccaag actgccacca gtctacacat acagcagccc cctggacaga atcagcattt
 1980
 cagctcagct ggcttgaat gggccaggct ggtcctggct gcctgttccc tgtgctcttc
 2040
 agaattactg tttttgtttc cttttacccc agctgccatt aaagcccaaa cctctagccc
 2100
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa
 2155

<210> 5286

<211> 628

<212> PRT

<213> Homo sapiens

<400> 5286

Xaa Arg Val Gln Gln Arg Met Glu Glu Ser Glu Pro Glu Arg Lys Arg
 1 5 10 15
 Ala Arg Thr Asp Glu Val Pro Ala Gly Gly Ser Arg Ser Glu Ala Glu
 20 25 30
 Asp Glu Asp Asp Glu Asp Tyr Val Pro Tyr Val Pro Leu Arg Gln Arg
 35 40 45
 Arg Gln Leu Leu Leu Gln Lys Leu Leu Gln Arg Arg Arg Lys Gly Ala
 50 55 60
 Ala Glu Glu Glu Gln Gln Asp Ser Gly Ser Glu Pro Arg Gly Asp Glu
 65 70 75 80
 Asp Asp Ile Pro Leu Gly Pro Gln Ser Asn Val Ser Leu Leu Asp Gln
 85 90 95
 His Gln His Leu Lys Glu Lys Ala Glu Ala Arg Lys Glu Ser Ala Lys

100 105 110
 Glu Lys Gln Leu Lys Glu Glu Glu Lys Ile Leu Glu Ser Val Ala Glu
 115 120 125
 Gly Arg Ala Leu Met Ser Val Lys Glu Met Ala Lys Gly Ile Thr Tyr
 130 135 140
 Asp Asp Pro Ile Lys Thr Ser Trp Thr Pro Pro Arg Tyr Val Leu Ser
 145 150 155 160
 Met Ser Glu Glu Arg His Glu Arg Val Arg Lys Lys Tyr His Ile Leu
 165 170 175
 Val Glu Gly Asp Gly Ile Pro Pro Pro Ile Lys Ser Phe Lys Glu Met
 180 185 190
 Lys Phe Pro Ala Ala Ile Leu Arg Gly Leu Lys Lys Lys Gly Ile His
 195 200 205
 His Pro Thr Pro Ile Gln Ile Gln Gly Ile Pro Thr Ile Leu Ser Gly
 210 215 220
 Arg Asp Met Ile Gly Ile Ala Phe Thr Gly Ser Gly Lys Thr Leu Val
 225 230 235 240
 Phe Thr Leu Pro Val Ile Met Phe Cys Leu Glu Gln Glu Lys Arg Leu
 245 250 255
 Pro Phe Ser Lys Arg Glu Gly Pro Tyr Gly Leu Ile Ile Cys Pro Ser
 260 265 270
 Arg Glu Leu Ala Arg Gln Thr His Gly Ile Leu Glu Tyr Tyr Cys Arg
 275 280 285
 Leu Leu Gln Glu Asp Ser Ser Pro Leu Leu Arg Cys Ala Leu Cys Ile
 290 295 300
 Gly Gly Met Ser Val Lys Glu Gln Met Glu Thr Ile Arg His Gly Val
 305 310 315 320
 His Met Met Val Ala Thr Pro Gly Arg Leu Met Asp Leu Leu Gln Lys
 325 330 335
 Lys Met Val Ser Leu Asp Ile Cys Arg Tyr Leu Ala Leu Asp Glu Ala
 340 345 350
 Asp Arg Met Ile Asp Met Gly Phe Glu Gly Asp Ile Arg Thr Ile Phe
 355 360 365
 Ser Tyr Phe Lys Gly Gln Arg Gln Thr Leu Leu Phe Ser Ala Thr Met
 370 375 380
 Pro Lys Lys Ile Gln Asn Phe Ala Lys Ser Ala Leu Val Lys Pro Val
 385 390 395 400
 Thr Ile Asn Val Gly Arg Ala Gly Ala Ala Ser Leu Asp Val Ile Gln
 405 410 415
 Glu Val Glu Tyr Val Lys Glu Glu Ala Lys Met Val Tyr Leu Leu Glu
 420 425 430
 Cys Leu Gln Lys Thr Pro Pro Pro Val Leu Ile Phe Ala Glu Lys Lys
 435 440 445
 Ala Asp Val Asp Ala Ile His Glu Tyr Leu Leu Leu Lys Gly Val Glu
 450 455 460
 Ala Val Ala Ile His Gly Gly Lys Asp Gln Glu Glu Arg Thr Lys Ala
 465 470 475 480
 Ile Glu Ala Phe Arg Glu Gly Lys Lys Asp Val Leu Val Ala Thr Asp
 485 490 495
 Val Ala Ser Lys Gly Leu Asp Phe Pro Ala Ile Gln His Val Ile Asn
 500 505 510
 Tyr Asp Met Pro Glu Glu Ile Glu Asn Tyr Val His Arg Ile Gly Arg
 515 520 525
 Thr Gly Arg Ser Gly Asn Thr Gly Ile Ala Thr Thr Phe Ile Asn Lys

530 535 540
 Ala Cys Asp Glu Ser Val Leu Met Asp Leu Lys Ala Leu Leu Leu Glu
 545 550 555 560
 Ala Lys Gln Lys Val Pro Pro Val Leu Gln Val Leu His Cys Gly Asp
 565 570 575
 Glu Ser Met Leu Asp Ile Gly Gly Glu Arg Gly Cys Ala Phe Cys Gly
 580 585 590
 Gly Leu Gly His Arg Ile Thr Asp Cys Pro Lys Leu Glu Ala Met Gln
 595 600 605
 Thr Lys Gln Val Ser Asn Ile Gly Arg Lys Asp Tyr Leu Ala His Ser
 610 615 620
 Ser Met Asp Phe
 625

<210> 5287
 <211> 581
 <212> DNA
 <213> Homo sapiens

<400> 5287
 nnagagcctc cagagcctcc gggctctgggc ggcgcttcgg ctccctcccga gccgcctgct
 60
 agccccgcgc cgactccat cccacaggc tggggacggg ccaggtgcgg ctgtgtgggt
 120
 tcgggagcgg agttgcagaa tccaaggacc cattttgttc tttctccgca ctgctttatg
 180
 ggaggcatta tggcccccaa agacataatg acaaatactc atgctaaatc catcctcaat
 240
 tcaatgaact ccctcaggaa gagcaatacc ctctgtgatg tgacattgag agtagagcag
 300
 aaagaacttc ctgcccacgc gattgtgctg gctgcctgta gtgattactt ctgtgccatg
 360
 ttactagtgc agctctcaga gaaggggaaa ccttatgttg acatccaagg tttgactgcc
 420
 tctaccatgg aaattttatt ggactttgtg tacacagaaa cggtagatgt gacagtggag
 480
 aatgtacaag aactgcttcc tgcagcctgt ctgcttcagt tgaaagggtg gaaacaagcc
 540
 tgctgtgagt tcttagaaag tcagttggac ccttcacgcg t
 581

<210> 5288
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 5288
 Xaa Glu Pro Pro Glu Pro Pro Gly Leu Gly Gly Ala Ser Ala Pro Pro
 1 5 10 15
 Glu Pro Pro Ala Ser Pro Ala Pro His Ser Ile Pro Thr Gly Trp Gly
 20 25 30
 Arg Ala Arg Cys Gly Cys Val Gly Ser Gly Ala Glu Leu Gln Asn Pro
 35 40 45
 Arg Thr His Phe Val Leu Ser Pro His Cys Phe Met Gly Gly Ile Met

50 55 60
 Ala Pro Lys Asp Ile Met Thr Asn Thr His Ala Lys Ser Ile Leu Asn
 65 70 75 80
 Ser Met Asn Ser Leu Arg Lys Ser Asn Thr Leu Cys Asp Val Thr Leu
 85 90 95
 Arg Val Glu Gln Lys Asp Phe Pro Ala His Arg Ile Val Leu Ala Ala
 100 105 110
 Cys Ser Asp Tyr Phe Cys Ala Met Phe Thr Ser Glu Leu Ser Glu Lys
 115 120 125
 Gly Lys Pro Tyr Val Asp Ile Gln Gly Leu Thr Ala Ser Thr Met Glu
 130 135 140
 Ile Leu Leu Asp Phe Val Tyr Thr Glu Thr Val His Val Thr Val Glu
 145 150 155 160
 Asn Val Gln Glu Leu Leu Pro Ala Ala Cys Leu Leu Gln Leu Lys Gly
 165 170 175
 Val Lys Gln Ala Cys Cys Glu Phe Leu Glu Ser Gln Leu Asp Pro Ser
 180 185 190
 Arg

<210> 5289
 <211> 361
 <212> DNA
 <213> Homo sapiens

<400> 5289
 agatctctgt acacatgtta caccagacag ctatattcca tgccttgag acctgtgcaa
 60
 agcactatgg gaagttatgc tcagctatta taggactatg gaatggcatg aaaagcatga
 120
 caatgaggat actgcttcag cttctgaagg ggaagtatat gatagggtcc tgaagaaact
 180
 tattttgatc ggggctacat taaaaaagaa attagaacat ggacttacac gaatatggca
 240
 ggatgttcag ctaaaagtaa aaacctactt gcttggaact gatttgtcta tattcaaata
 300
 tgatgatttc atctttgttt tggatataat cagcagggtg atgcaagttg gagaagaatt
 360
 c
 361

<210> 5290
 <211> 95
 <212> PRT
 <213> Homo sapiens

<400> 5290
 Met Leu Ser Tyr Tyr Arg Thr Met Glu Trp His Glu Lys His Asp Asn
 1 5 10 15
 Glu Asp Thr Ala Ser Ala Ser Glu Gly Glu Val Tyr Asp Arg Val Leu
 20 25 30
 Lys Lys Leu Ile Leu Ile Gly Ala Thr Leu Lys Lys Lys Leu Glu His
 35 40 45
 Gly Leu Thr Arg Ile Trp Gln Asp Val Gln Leu Lys Val Lys Thr Tyr

50		55		60	
Leu	Leu	Gly	Thr	Asp	Leu
					Ser
					Ile
					Phe
					Lys
					Tyr
					Asp
					Asp
					Phe
					Ile
					Phe
65		70		75	80
Val	Leu	Asp	Ile	Ile	Ser
					Arg
					Leu
					Met
					Gln
					Val
					Gly
					Glu
					Glu
					Phe
		85		90	95

<210> 5291
 <211> 767
 <212> DNA
 <213> Homo sapiens

<400> 5291
 gtcgggaggt tctttgcgct gatagcaggg acgaagacca caccattgac caagaagatg
 60
 aagatggcca cgcagaagac tcccagcagg gcgtacatgc ccagctctag ctcaagtaca
 120
 tgctgagggg cagggacat ctctcctcc tcttcctct cctccctggc tttggtctcc
 180
 tccttcctgg cctcctcctc tgcccgtca aacttgcccc tcacacctgt gttgcccccg
 240
 aactgcctg ccacctgccg tttaccaccc atggtggctt ctgtggctgg tgggctccaa
 300
 gcagggtgg atggggagag caggggctgg agtggaggca gggggcagcc ccaccaggc
 360
 ggtgccagag gccaaaggca cacggtggcg gccccggcgn gcagggtcg ggcgggtgca
 420
 gagccacatg cagcggcagc ccctcggcgc ctgccccact caccaccacc ccgagctggg
 480
 caccctgctc ctcaagtggc aggatggcac caggctcctc ggctgaaacg gacagtccca
 540
 gtcaggcggc cgtagagctc agctgggcca cagtgtgatc agagaaggac agccataggg
 600
 agagggccac ctctgtggg gcacacagac acaggcagag acatgagagg gcacgcacgc
 660
 atgcacagag aaaccactcc cacagagaca ggccacatgg aggagagacc agagagaaaa
 720
 cagagacaca ggcagataga caaaacacag ggagagaggg gacgcgt
 767

<210> 5292
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 5292
 Gly Ala Gly Thr Ile Ser Ser Ser Ser Ser Ser Ser Ser Leu Ala Leu
 1 5 10 15
 Val Ser Ser Phe Leu Ala Ser Ser Ser Ala Arg Ser Asn Leu Pro Leu
 20 25 30
 Thr Pro Val Leu Pro Pro Thr Leu Pro Ala Thr Cys Arg Leu Pro Pro
 35 40 45
 Met Val Ala Ser Val Ala Gly Gly Leu Gln Ala Gly Leu Asp Gly Glu
 50 55 60
 Ser Arg Gly Trp Ser Gly Gly Arg Gly Gln Pro His Pro Gly Gly Ala

65					70					75				80
Arg	Gly	Gln	Arg	His	Thr	Val	Ala	Ala	Pro	Ala	Xaa	Arg	Ala	Arg
				85					90				95	
Gly	Ala	Glu	Pro	His	Ala	Ala	Ala	Ala	Pro	Arg	Arg	Leu	Pro	His
			100				105						110	
Pro	Pro	Pro	Arg	Ala	Gly	His	Pro	Ala	Pro	Gln	Leu	Ala	Gly	Trp
		115				120					125			
Gln	Ala	Pro	Arg	Leu	Lys	Arg	Thr	Val	Pro	Val	Arg	Arg	Ser	
	130					135					140			

<210> 5293
 <211> 1428
 <212> DNA
 <213> Homo sapiens

<400> 5293
 tcagactgtg tgggtggttt ccccgccgc agctccgtac gggcttggat tgctgggcct
 60
 cgggtgcaccc cagcctcccc cactcgggtt ctgagcttga gctggcggct ctttaactct
 120
 gcttcactgt tgctcttggc aacatccact tccgggagcg agtgccgttt cccccgtca
 180
 ccgcgggcta gggagcgtgg gattccggac tgtgagcggc tgtagtgcg tcgcagctgc
 240
 tggcgatccg gcgaccctcg gccggcagga cccgcgggcc acgcagccgg ggccttctca
 300
 acgcctcagt acctcggcgg gaccgccatg gttctgctgc acgtgaagcg gggcgacgag
 360
 agccagttcc tgctgcaggc gcctgggagt accgagctgg aggagctcac ggtgcaggtg
 420
 gcccggtct ataatggcg gctcaaggcg cagcgctct gctcagaaat ggaagaatta
 480
 gccgaacatg gcatatttct cctcctaata atgcaaggac tgaccgatga tcagattgaa
 540
 gaattgaaat tgaaggatga atggggtgaa aaatgcgtac ccagcggagg tgcaagtgtt
 600
 aaaaaggatg atattggacg aaggaatggg caagctcaa atgagaagat gaagcaagtg
 660
 ttaaagaaga ctatagaaga agccaaggca ataatatcta agaaacaagt ggaagccggt
 720
 gtctgtgtta ccatggagat ggtgaaagat gccttgacc agcttcgagg cgcggtgatg
 780
 attgtttacc ccatggggtt gccaccgtat gatcccatcc gcatggagtt tgaaaataag
 840
 gaagacttgt cgggaacaca ggcagggtc aacgtcatta aagaggcaga ggcgcagctg
 900
 tgggtggcag ccaaggagct gagaagaacg aagaagcttt cagactacgt ggggaagaat
 960
 gaaaaaacca aaattatcgc caagattcag caaaggggac agggagctcc agcccgagag
 1020
 cctattatta gcagtgagga gcagaagcag ctgatgctgt actatcacag aagacaagag
 1080
 gagctcaaga gattggaaga aaatgatgat gatgcctatt taaactcacc atgggcggat
 1140

aacactgctt tgaaaagaca ttttcatgga gtgaaagaca taaagtgagg accaagatga
 1200
 agttcaccag ctgatgacac ttccaaagag attagctcac ctttctccta ggcaattata
 1260
 atttaaaaaa aaaaaaaagg ccacttactg ccctctgtaa aagatgttaa ctttcttagt
 1320
 tttcttttag tgtgaatttt taaaatagca gttattcaag gttttagaac ttaataaata
 1380
 cctagtcaga agaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
 1428

<210> 5294

<211> 290

<212> PRT

<213> Homo sapiens

<400> 5294

Met	Val	Leu	Leu	His	Val	Lys	Arg	Gly	Asp	Glu	Ser	Gln	Phe	Leu	Leu
1				5					10					15	
Gln	Ala	Pro	Gly	Ser	Thr	Glu	Leu	Glu	Glu	Leu	Thr	Val	Gln	Val	Ala
			20					25					30		
Arg	Val	Tyr	Asn	Gly	Arg	Leu	Lys	Val	Gln	Arg	Leu	Cys	Ser	Glu	Met
		35					40					45			
Glu	Glu	Leu	Ala	Glu	His	Gly	Ile	Phe	Leu	Pro	Pro	Asn	Met	Gln	Gly
		50				55					60				
Leu	Thr	Asp	Asp	Gln	Ile	Glu	Glu	Leu	Lys	Leu	Lys	Asp	Glu	Trp	Gly
65				70					75					80	
Glu	Lys	Cys	Val	Pro	Ser	Gly	Gly	Ala	Val	Phe	Lys	Lys	Asp	Asp	Ile
			85					90						95	
Gly	Arg	Arg	Asn	Gly	Gln	Ala	Pro	Asn	Glu	Lys	Met	Lys	Gln	Val	Leu
			100					105					110		
Lys	Lys	Thr	Ile	Glu	Glu	Ala	Lys	Ala	Ile	Ile	Ser	Lys	Lys	Gln	Val
		115					120					125			
Glu	Ala	Gly	Val	Cys	Val	Thr	Met	Glu	Met	Val	Lys	Asp	Ala	Leu	Asp
		130				135				140					
Gln	Leu	Arg	Gly	Ala	Val	Met	Ile	Val	Tyr	Pro	Met	Gly	Leu	Pro	Pro
145				150					155					160	
Tyr	Asp	Pro	Ile	Arg	Met	Glu	Phe	Glu	Asn	Lys	Glu	Asp	Leu	Ser	Gly
			165					170					175		
Thr	Gln	Ala	Gly	Leu	Asn	Val	Ile	Lys	Glu	Ala	Glu	Ala	Gln	Leu	Trp
		180						185					190		
Trp	Ala	Ala	Lys	Glu	Leu	Arg	Arg	Thr	Lys	Lys	Leu	Ser	Asp	Tyr	Val
		195					200					205			
Gly	Lys	Asn	Glu	Lys	Thr	Lys	Ile	Ile	Ala	Lys	Ile	Gln	Gln	Arg	Gly
		210				215					220				
Gln	Gly	Ala	Pro	Ala	Arg	Glu	Pro	Ile	Ile	Ser	Ser	Glu	Glu	Gln	Lys
225				230					235					240	
Gln	Leu	Met	Leu	Tyr	Tyr	His	Arg	Arg	Gln	Glu	Glu	Leu	Lys	Arg	Leu
			245					250					255		
Glu	Glu	Asn	Asp	Asp	Ala	Tyr	Leu	Asn	Ser	Pro	Trp	Ala	Asp	Asn	
		260					265					270			
Thr	Ala	Leu	Lys	Arg	His	Phe	His	Gly	Val	Lys	Asp	Ile	Lys	Trp	Arg
		275				280						285			

Pro Arg

290

<210> 5295

<211> 1451

<212> DNA

<213> Homo sapiens

<400> 5295

tttttttttt tttttttttt tttttttttt attcagctaa catttattga gcccttaatg
60
aacacataag agttttgact tcacggcagt tcatactggg acctcagacc actgaaggca
120
gacagtaacg agcagtgtcg gccgggcccc actttcagag ggggcggaag ggcattctga
180
cacgtgtcat atggttaagag gcgcattccac tcacccaggc ctggtgcagg actctgcaag
240
gccctcctga gtaaagagtg gccacgaagg gctgctaggc agcacctact cttggaatca
300
agcagggaaa aagtgcacaaa ttggagctgg cgggaggtgt gtgtgcctgc cccacagatg
360
gctgtggtga gccacaaagc accaagattc tgttcttcat tcagcaacca cccatgagcc
420
tcctgcttta ttccaatcgc atggcaccag cctgaaaacc tctctccctt ctgagaggaa
480
tgctggaatg aactccact ctgcccctcc ctccctcctt ccttgctcag ggtccatgtg
540
aacagcaggc cattgttggg aagtgcctgt tgcagtcatt cttacacccc cacagccact
600
gccccacaca cccactggtg gctaccaagg cccgtcaata gatcttgtgt ccaccgagcc
660
ctgggtgtcca ggtccagcag ccagacaggc tgaaggttcc ctctgccat cacagagtag
720
ccaagcacta caaagagggt ttcatggcca gattcctgac ggctggcccc ttacagggca
780
gacctgttcc ttacaggtgt caagggtgga gggtcctggg tcctccatga cctggggggg
840
ttgctggtcc cccatcttgg ttcttgagtc tcaccccttc aagatgacct tgagagcttt
900
aagctcatcc tgggtgaggg ggttcaagtt aaaacccttc agtcccggtt tgccttgggc
960
ctcaaaaagg cggttgacct tcactttaag ttgcttccgc agtttttcta tttctttatc
1020
cagatgatct tgatcttttt caatcatttc ctttgtctca gggtgaggca tcttgataaa
1080
catgttcccc aagcaaacca tcacatcttc agagaggctg agatccttct gcagggccct
1140
caggccctct cgattctgat tccttttagt gtccaggctc acaatctgcc gcttgtccgc
1200
cagcacctcc tcggcgagct cctccacttc tacaaggtag cgcagcactc gctctgcctc
1260
gggtgatagc atagcgccca ccaactccgc ttgcggctct cgcgcgaccc cgggatctcc
1320
gcttcgggaa catgtttatc aagatgcctc accctgagac aaaggaaatg attgaaaaaa
1380

atcaagatca tctggataaa gaaatagaaa aactgcggaa gcaacttaaa gtgaagggtcc
 1440
 ccttcacgcg t
 1451

<210> 5296
 <211> 133
 <212> PRT
 <213> Homo sapiens

<400> 5296
 Met Leu Ser Pro Glu Ala Glu Arg Val Leu Arg Tyr Leu Val Glu Val
 1 5 10 15
 Glu Glu Leu Ala Glu Glu Val Leu Ala Asp Lys Arg Gln Ile Val Asp
 20 25 30
 Leu Asp Thr Lys Arg Asn Gln Asn Arg Glu Gly Leu Arg Ala Leu Gln
 35 40 45
 Lys Asp Leu Ser Leu Ser Glu Asp Val Met Val Cys Phe Gly Asn Met
 50 55 60
 Phe Ile Lys Met Pro His Pro Glu Thr Lys Glu Met Ile Glu Lys Asp
 65 70 75 80
 Gln Asp His Leu Asp Lys Glu Ile Glu Lys Leu Arg Lys Gln Leu Lys
 85 90 95
 Val Lys Val Asn Arg Leu Phe Glu Ala Gln Gly Lys Pro Glu Leu Lys
 100 105 110
 Gly Phe Asn Leu Asn Pro Leu Asn Gln Asp Glu Leu Lys Ala Leu Lys
 115 120 125
 Val Ile Leu Lys Gly
 130

<210> 5297
 <211> 5318
 <212> DNA
 <213> Homo sapiens

<400> 5297
 tgtgacagag cagtaagact aacgaaacaa gggtaaata catctggatc tgatacactc
 60
 agcttcccat tgctgagagc tcctgctgtt gattgtggaa aaggacacct cttctgctgg
 120
 gagtgccttg gtgaagcaca tgagccttgt gactgccaaa catggaagaa ttggctgcaa
 180
 aaaaataaccg aaatgaaacc agaagaactt gtgggagtta gtgaagccta cgaggatgcc
 240
 gccaatgtgc tctgggttatt aactaactcc aagccttgtg ccaactgtaa gtctccaata
 300
 cagaagaatg aaggctgcaa tcacatgcag tgtgctaagt gcaagtatga cttttgctgg
 360
 atttgccttg aagagtggaa aaaacatagt tcgtccactg gaggttatta cggatgtact
 420
 cgctatgaag tcattcaaca cgtggaggag caatccaagg aaatgactgt ggaggctgag
 480
 aaaaaacaca aacgatttca ggaacttgac agatttatgc actattatac aagatttaaa
 540

aaccatgagc atagttatca gctagaacaa cgccttctta aaacagccaa agaaaagatg
600
gagcaattga gcagagctct caaagaaact gaaggaggct gtccagatac cactttcatt
660
gaagatgcag ttcattgtgct cttaaaaaact cggcgcatc tcaagtgttc ttatccatat
720
ggatttttct tggaacctaa aagcacaaag aaagaaattt ttgaactaat gcaaacagac
780
ctagaaatgg tcaactgaaga ccttgcccag aaagtcaata ggccttacct tcgcacaccc
840
cgccacaaga tcatcaaagc agcatgcctt gtacagcaga agaggcaaga attcctggca
900
tctgtggctc ggggagtagc tcttcagac tcaccagaag ctccaaggcg cagctttgct
960
ggtggaacat gggattggga atatttagga ttgcatcac cagaggaata tgctgaattt
1020
cagtatcgga ggaggcacag acaacgtcgt cgaggagatg ttcacagtct actcagtaat
1080
cctccagacc ctgatgagcc aagtgaagc actttagata ttccagaagg cggcagcagc
1140
agccgcaggc ctggcacatc cgtggtaagt tctgcatcta tgagtgtgct gcacagctct
1200
tccttgcgtg actacacccc tgccagtgc tctgaaaacc aggactctct tcaggctctg
1260
agttccttgg atgaagacga tcccaatata cttcttgcaa tacagttatc actgcaagag
1320
tctgggctgg ccctcgatga agaaactaga gacttctca gtaatgaagc atccttaggt
1380
gcgataggca cttctttacc ttccaggctg gactctgtcc ccagaaatac agatagccct
1440
cgggctgcat tgagcagctc tgagcttttg gaacttggtg acagcctcat gagactagga
1500
gcagagaatg acccattttc aactgacacc ctgagctcac accctctcag tgaggcaaga
1560
agtgtattct gtccctcatc tagtgatcct gactcagctg gccaggaccc caacatcaat
1620
gacaatcttc tcggcaacat catggcttgg ttcatgaca tgaaccctca gagtattgcc
1680
ctgattctc cagcaactac agaaatcagt gcagattccc agtcccctg tatcaaagat
1740
gggtcagaag gtgtgaagga tgtggaactg gtgtgccag aagattcaat gtttgaagat
1800
gccagtgtca gtgaaggtag aggaaccag atagaagaaa atcctttgga agaaaatatt
1860
ctggcggggg aagcagcatc tcaagctggt gacagtggta acgaggcagc caacagagga
1920
gatggttcag atgtttcaag tcaaacacct caaacctcaa gtgactggct tgaacaagta
1980
catttagtgt gaactgcaca catctgggct ctaaataat tacaggtaca gatggtatgc
2040
taggtggagt atgcttgata gagactttga ttacttaat tccaactcag tgataaacca
2100
ctgacattag ggttgaatac agagaagtcc ccttgaatgg tagcttcatt ttttatttta
2160

accttacagg gaatttcctt tgtacttaat tgaatagctt ttcccccttt tgctgacaaa
2220
aagaagagca agagaaagag aaacaaaaat gaaataaata agttgtattc cacactctaa
2280
gaaaatgcag tctctatatt agcctaggct tgacaatact taaattgaac atttaaacta
2340
aaggcttact ccctaactct tgggtggctt tcctttaaaa aaaaaaaaaa agttttcttc
2400
attctagaaa tttatttttg ataaatccga taacatatat gtcctcaatc tctttgtgct
2460
cttcataac ttacttcctt ttgtctgag caatgtgaat tgaagtctct ttagtaccac
2520
atctaccata gtgtaattag ttttaatttt cacatgaatc aaagggttcc tttcatgtct
2580
atttacagtc caattgtgcc aaactcttac ttgtgtgctg actaacaagg catttaggtg
2640
tgacagcatcc tagagtgtc cagggcagtg tcagcgttct cgggagtaaa aggtgccact
2700
tggtagcaat gatattccag aattaaatgg gttttgttg ccatggagac tgcatttata
2760
taaagttagc ctgtagctta agttaactaa acctaagtct gctgttaaaa acagtttatt
2820
ttaatattaa aatacagttg attagcaaca gcggtgctgt attttaagag acactttatt
2880
ggaagtgcaa tcatagttat ttgttttcac aattttacag tgcattctaa ttactgatgg
2940
gtgcaattac ttttaatcgt gttttataaa atagaaaaaa agtggagttt tcatgagtta
3000
tagtaaatcc cacgattatt aagaaattca ataaacatc ctgcgcaaca tgttaccgtg
3060
cctttgccta acctaaatgg atagttgcca gttaaataag tgagtaattc aaatttcaat
3120
gtctctctcg aagtaactat gctatgaatt gcaaagacct ccataaaacc acctatggcc
3180
ttgcttttac actaactata acaactaaat gttaactcag ttgtttgcc taactagcaa
3240
atgctgacat gtgtttgttc tactgcgcaa tactcatttg ctgtgtgatt actgtttagt
3300
gttgaaaaaa atcaacttcc tagttatcag tgtcttactg tgaagaaaat actggtctta
3360
gttgtaatta ggatacaatg gtacagtgtg taattaaaac tagagtaaac tgttggaatg
3420
gctgttttac ttaaataatta tcaaaactag cataacataa gcaaaataga taagtacaac
3480
actccattta gtgttttgcc agattgttac cagaagtcta cagataccaa actttcagtt
3540
ctgagtttgt acaggcaagt cctgggctgg gtaaaaagt atattaatat tgttatccac
3600
aagagatgtg attatgggtt ttgattactt ttttttttcc aaacctgct tttgaaatat
3660
cctgtactt aaaattcata ttgctaagac actgtattag aatatttaat attccccaga
3720
tcctcttagg ataaactgtg ggaatcctcc tatgccatgg atatcaaagg tccacattag
3780

tttttatttc tccagtgatc agaaacattg atatcaatcc ctattaaatt agtgggggga
3840
atattaactt tatctacagt gtattactgt atattaaact gaaatagtcc attaaaggat
3900
ttttttataa atttattttg gattaaaaat atcaacacca ataagttttt agaccaagtt
3960
gtaatttttc caatatagag tctttgcac acactgaggc atcttgaca gctgcagtta
4020
aggtagagaa gaatgctctg tgtgaagaca gtgtacacaa tgggttccgg tttccttgca
4080
ccttgtagcag tatcctttat ttctgtgctg ttctctctg agcatgaaa atgatacatta
4140
tccaatttgt atttccttgg tacatatattt aaaaacaaca cagtcattga ctttacaatt
4200
cagtaatgaa gtttggcaaa gcctattttg taaacaagtt aattttataa tgtaaaaaa
4260
aaaagttaat ctaaccttga cttgttattt gcactttcat agtctatact tgatacatte
4320
ccactttata tacagtagga ttctacaaac gtgtagatgt ttggccaaat gaatgctgtt
4380
aataatatgt aaaattcttt gattaaacat ttattactta aactatttcc atttttgtct
4440
cattaaatta taaacttcat ttaaaactaa ttagaaagca aatcttgctt tatattaaat
4500
accctccaat atgacagtat taatttgggt ctattatgta attgaatagt gcctaattt
4560
tttacagtaa cccacttgct gaaaattgta taccacagag gtaaatttga tttcactttt
4620
ttgtttttga ttgtttttat ttttattttt ttattttttt aaaagattta tttatttatt
4680
atatgtaagt acactgtagc tgtcttcaga cacaccagaa gagggcccca gatcttgta
4740
cagatgggtg tgagccacca tgtcgggtgct gggaattgaa ctacgcacct tgagaagagc
4800
agtcagtgtc cgtaaccgct gagccatctc tccagccctc caaagattca cttttaaaag
4860
atcatttgat gaaaagccag ggagtatggg gtgtgggggtg tggaaggcct tcaggaaaag
4920
gcttgcatgt ggcgatgtgc ttttcttgcc ctcccatga ggttcctagc cattagtagc
4980
agatgtaata atggtgacag agctcagata aaacaaaaag aatggagaaa tgccaaggct
5040
caaataaaaa tgaggcttga tatatttcca gaatgaaaa atatttaata aaatcagggt
5100
caagagaaag tccctatacc acttgtcttc ctccctcact tctggtcaga ccaagggcgc
5160
ctgcatcgga agctatctga cctcaagtca ggcacactgt gtcttcaggg cttctcagga
5220
tgcttcttta taaggtcaaa ccacacaggt cagggaagac ccaggtagc gctggggagc
5280
cccacaggta tagggctgag ggagcccagt aggtaccg
5318

<210> 5298

<211> 663

<212> PRT

<213> Homo sapiens

<400> 5298

Cys Asp Arg Ala Val Arg Leu Thr Lys Gln Gly Ser Asn Thr Ser Gly
 1 5 10 15
 Ser Asp Thr Leu Ser Phe Pro Leu Leu Arg Ala Pro Ala Val Asp Cys
 20 25 30
 Gly Lys Gly His Leu Phe Cys Trp Glu Cys Leu Gly Glu Ala His Glu
 35 40 45
 Pro Cys Asp Cys Gln Thr Trp Lys Asn Trp Leu Gln Lys Ile Thr Glu
 50 55 60
 Met Lys Pro Glu Glu Leu Val Gly Val Ser Glu Ala Tyr Glu Asp Ala
 65 70 75 80
 Ala Asn Cys Leu Trp Leu Leu Thr Asn Ser Lys Pro Cys Ala Asn Cys
 85 90 95
 Lys Ser Pro Ile Gln Lys Asn Glu Gly Cys Asn His Met Gln Cys Ala
 100 105 110
 Lys Cys Lys Tyr Asp Phe Cys Trp Ile Cys Leu Glu Glu Trp Lys Lys
 115 120 125
 His Ser Ser Ser Thr Gly Gly Tyr Tyr Gly Cys Thr Arg Tyr Glu Val
 130 135 140
 Ile Gln His Val Glu Glu Gln Ser Lys Glu Met Thr Val Glu Ala Glu
 145 150 155 160
 Lys Lys His Lys Arg Phe Gln Glu Leu Asp Arg Phe Met His Tyr Tyr
 165 170 175
 Thr Arg Phe Lys Asn His Glu His Ser Tyr Gln Leu Glu Gln Arg Leu
 180 185 190
 Leu Lys Thr Ala Lys Glu Lys Met Glu Gln Leu Ser Arg Ala Leu Lys
 195 200 205
 Glu Thr Glu Gly Gly Cys Pro Asp Thr Thr Phe Ile Glu Asp Ala Val
 210 215 220
 His Val Leu Leu Lys Thr Arg Arg Ile Leu Lys Cys Ser Tyr Pro Tyr
 225 230 235 240
 Gly Phe Phe Leu Glu Pro Lys Ser Thr Lys Lys Glu Ile Phe Glu Leu
 245 250 255
 Met Gln Thr Asp Leu Glu Met Val Thr Glu Asp Leu Ala Gln Lys Val
 260 265 270
 Asn Arg Pro Tyr Leu Arg Thr Pro Arg His Lys Ile Ile Lys Ala Ala
 275 280 285
 Cys Leu Val Gln Gln Lys Arg Gln Glu Phe Leu Ala Ser Val Ala Arg
 290 295 300
 Gly Val Ala Pro Ala Asp Ser Pro Glu Ala Pro Arg Arg Ser Phe Ala
 305 310 315 320
 Gly Gly Thr Trp Asp Trp Glu Tyr Leu Gly Phe Ala Ser Pro Glu Glu
 325 330 335
 Tyr Ala Glu Phe Gln Tyr Arg Arg Arg His Arg Gln Arg Arg Gly
 340 345 350
 Asp Val His Ser Leu Leu Ser Asn Pro Pro Asp Pro Asp Glu Pro Ser
 355 360 365
 Glu Ser Thr Leu Asp Ile Pro Glu Gly Gly Ser Ser Arg Arg Pro
 370 375 380
 Gly Thr Ser Val Val Ser Ser Ala Ser Met Ser Val Leu His Ser Ser

```
<210> 5299
<211> 368
<212> DNA
<213> Homo sapiens
```

```

<400> 5299
nactgcagcg gcagcgacca cagcagtcctg ggcttggagc agttacagga ttacatggtc
60
acgttgcgga gtaagctggg gccctcgag atccagcagt ttgcgatgct gctgcgggag
120
taccggctgg ggctgcccat ccaggactat tgcacaggcc tgctgaagct ctacggagac
180
cggcgcaagt tcctcctcct tgggatgcgg cccttcaccc cggaccagga catcggctac
240
ttcgagggct tcctggaggg cgtgggcac cgcgagggcg gcacccctac tgacagcttc
300
ggccgcatca agccagatga gctccacgtc ggccctccgca gtgcgcagct cacgatggcg
360

```


cggcgagc
368

<210> 5300
<211> 122
<212> PRT
<213> Homo sapiens

<400> 5300
Xaa Cys Ser Gly Ser Asp His Ser Ser Leu Gly Leu Glu Gln Leu Gln
1 5 10 15
Asp Tyr Met Val Thr Leu Arg Ser Lys Leu Gly Pro Leu Glu Ile Gln
20 25 30
Gln Phe Ala Met Leu Leu Arg Glu Tyr Arg Leu Gly Leu Pro Ile Gln
35 40 45
Asp Tyr Cys Thr Gly Leu Leu Lys Leu Tyr Gly Asp Arg Arg Lys Phe
50 55 60
Leu Leu Leu Gly Met Arg Pro Phe Ile Pro Asp Gln Asp Ile Gly Tyr
65 70 75 80
Phe Glu Gly Phe Leu Glu Gly Val Gly Ile Arg Glu Gly Gly Ile Leu
85 90 95
Thr Asp Ser Phe Gly Arg Ile Lys Pro Asp Glu Leu His Val Gly Leu
100 105 110
Arg Ser Ala Gln Leu Thr Met Ala Arg Arg
115 120

<210> 5301
<211> 6712
<212> DNA
<213> Homo sapiens

<400> 5301
ntattagcca agctaagtta ctcttttgcc tctgttggtt actcaagtct tttctcttct
60
gtccttctgc cagccttacc ccactcctta atcctctgaa ccagcaaacc attgccaagt
120
tctgatgcaa agtggtttat aggcctgact ggaccagact aaaagtgttc aaaatagcaa
180
gcaacaagga gcagaaatcc atattagaat gggatatgga ctatatttat attggtacag
240
aatgccttca ataaagagtt gtgagttgtg taggtgagtt gccatggagc tacaaatatg
300
agttgatatt ctgaaatcct agacagccat ctccaagggt aagaaaaatc cttatgcact
360
cacttgcaaa gatatccaca gcatgctctt ggagcgccgc cggccgggag gcgaaggatg
420
caggcggtc cgcgcgccgg ctgcggggca gcgctcctgc tgtggattgt cagcagctgc
480
ctctgcagag cctggacggc tccctccacg tcccaaaaat gtgatgagcc acttgtctct
540
ggactcccc atgtggcttt cagcagctcc tctccatct ctggtagcta ttctcccggc
600
tatgccaaga taaacaagag aggaggtgct gggggatggt ctccatcaga cagcgacat
660

tatcaatggc ttcaggttga ctttggcaat cggagcaga tcagtgccat tgcaacccaa
720
ggaaggtata gcagctcaga ttgggtgacc caataccgga tgctctacag cgacacaggg
780
agaaactgga aaccctatca tcaagatggg aatatctggg catttcccgg aaacattaac
840
tctgacgggtg tggtcggca cgaattacag catccgatta ttgcccgcta tgtgcgcata
900
gtgcctctgg attggaatgg agaaggtcgc attggactca gaattgaagt ttatggctgt
960
tcttactggg ctgatgttat caactttgat ggccatgttg tattaccata tagattcaga
1020
aacaagaaga tgaaaacact gaaagatgtc attgccttga actttaagac gtctgaaagt
1080
gaaggagtaa tcctgcacgg agaaggacag caaggagatt acattacctt ggaactgaaa
1140
aaagccaagc tggtcctcag tttaaactta ggaagcaacc agcttggccc catatatggc
1200
cacacatcag tgatgacagg aagtttgctg gatgaccacc actggcactc tgtggtcatt
1260
gagcgccagg ggcgagcat taacctcact ctggacagga gcatgcagca cttccgtacc
1320
aatggagagt ttgactacct ggacttggac tatgagataa cctttggagg catcccttc
1380
tctggcaagc ccagctccag cagtagaaag aatttcaaag gctgcatgga aagcatcaac
1440
tacaatggcg tcaacattac tgatcttgcc agaaggaaga aattagagcc ctcaaagtgt
1500
ggaaatttga gcttttcttg tgtggaaccc tatacgggtgc ctgtcttttt caacgctaca
1560
agttacctgg aggtgcccgg acggcttaac caggacctgt tctcagtcag tttccagttt
1620
aggacatgga accccaatgg tctcctggtc ttcagtcact ttgcggataa tttgggcaat
1680
gtggagattg acctcactga aagcaaagtg ggtgttcaca tcaacatcac acagaccaag
1740
atgagccaaa tcgatatttc ctcaggttct gggttgaatg atggacagtg gcacgaggtt
1800
cgcttcctag ccaaggaaaa ttttgctatt ctcaccatcg atggagatga agcatcagca
1860
gttcgaacta atagtccct tcaagttaaa actggcgaga agtacttttt tggaggtttt
1920
ctgaaccaga tgaataactc aagtactct gtccctcagc cttcattcca aggatgcatg
1980
cagctcattc aagtggacga tcaacttgta aatttatacg aagtggcaca aaggaagccg
2040
ggaagtttcg cgaatgtcag cattgacatg tgtgcgatca tagacagatg tgtgcccaat
2100
cactgtgagc atgggtgaaa gtgctcgcaa acatgggaca gcttcaaag cacttgtgat
2160
gagacaggat acagtggggc cacctgccac aactctatct acgagccttc ctgtgaagcc
2220
tacaaacacc taggacagac atcaaattat tactggatag atcctgatgg cagcggacct
2280

ctggggcctc tgaaagtta ctgcaacatg acagaggaca aagtgtggac catagtgtct
2340
catgacttgc agatgcagac gcctgtggtc ggctacaacc cagaaaaata ctcagtgaca
2400
cagctcgttt acagcgctc catggaccag ataagtgcc tcaactgacag tgccgagtac
2460
tgcgagcagt atgtctccta tttctgcaag atgtcaagat tgttgaacac cccagatgga
2520
agcccttaca cttggtgggt tggcaaagcc aacgagaagc actactactg gggaggctct
2580
gggcctggaa tccagaaatg tgcctgcggc atcgaacgca actgcacaga tcccaagtac
2640
tactgtaact gcgacgcgga ctacaagcaa tggaggaagg atgctggttt cttatcatac
2700
aaagatcacc tgccagttag ccaagtgtg gttggagata ctgaccgtca aggctcagaa
2760
gccaaattga gcgtaggtcc tctgcgctgc caaggagaca ggaattattg gaatgccgcc
2820
tctttcccaa acccactctc ctacctgcac ttctctactt tccaagggga aactagcgct
2880
gacatttctt tctacttcaa aacattaacc ccctggggag tgtttcttga aaatatggga
2940
aaggaagatt tcatcaagct ggagctgaag tctgccacag aagtgtcctt ttcatttgat
3000
gtgggaaatg ggccagtaga gattgtagtg aggtcaccaa cccctctcaa cgatgaccag
3060
tggcaccggg tcaactgcaga gaggaatgtc aagcaggcca gcctacaggt ggaccggcta
3120
ccgcagcaga tccgcaaggc cccaacagaa ggccacaccc gcctggagct ctacagccag
3180
ttatttgtgg gtggtgctgg gggccagcag ggcttcctgg gctgcatccg ctccctgagg
3240
atgaatgggg tgacacttga cctggaggaa agagcaaagg tcacatctgg gttcatatcc
3300
ggatgctcgg gccattgcac cagctatgga acaaactgtg aaaatggagg caaatgccta
3360
gagagatacc acggttactc ctgcgattgc tctaatactg catatgatgg aacatthtgc
3420
aacaagatg ttggtgcatt ttttgaagaa gggatgtggc tacgatataa ctttcaggca
3480
ccagcaacaa atgccagaga ctccagcagc agagtagaca acgctcccga ccagcagaac
3540
tcccacccgg acctggcaca ggaggagatc cgcttcagct tcagcaccac caaggcgccc
3600
tgatttctcc tctacatcag ctccctcacc acagacttct tggcagtcct cgtcaaaccc
3660
actggaagct tacagattcg atacaacctg ggtggcaccg gagagccata caatattgac
3720
gtagaccaca ggaacatggc caatggacag cccacagtg tcaacatcac ccgccacgag
3780
aagaccatct ttctcaagct cgatcattat ctttctgtga gttaccatct gccaaagtta
3840
tccgacaccc tcttcaattc tcccaagtcg ctctttctgg gaaaagttat agaaacaggg
3900

aaaattgacc aagagattca caaatacaac accccaggat tcaactgggtg cctctccaga
3960
gtccagttca accagatcgc ccctctcaag gccgccttga ggcagacaaa cgccctcggt
4020
cacgtccaca tccagggcga gctggtggag tccaactgcg gggcctcgcc gctgaccctc
4080
tccccatgt cgtccgccac cgacccctgg cacctggatc acctggattc agccagtgcg
4140
gattttccat ataatccagg acaaggccaa gctataagaa atggagtcaa cagaaactcg
4200
gctatcattg gaggcgtcat tgctgtggtg attttcacca tcctgtgcac cctgggtctt
4260
ctgatccggt acatgttccg ccacaagggc acctaccata ccaacgaagc aaagggggcg
4320
gagtcggcag agagcgcgga cgccgccatc atgaacaacg accccaactt cacagagacc
4380
attgatgaaa gcaaaaagga atgggtcatt tgaggggtgg ctacttggct atgggatagg
4440
gaggagggaa ttactagga ggagagaaag ggacaaaagc accctgcttc atactcttga
4500
gcacatcctt aaaatatcag cacaagttgg gggaggcagg caatggaata taatggaata
4560
ttcttgagac tgatcacaaa aaaaaaaaaa acctttttaa ttttcttta tagctgagtt
4620
ttcccttctg tatcaaaaca aaataatata aaaaatgctt ttagagtta agcaatggtt
4680
gaaatttgta ggtactatct gtcttatttt gtgtgtgttt agaggtgttc taaagaccg
4740
tggtaacagg gcaagttttc tacgttttta agagccctta gaacgtgggt atttttttc
4800
ttgagaaaag ctaatgcacc tacagatggc cccaacatt ctcttctttt tgcttctagt
4860
caaccttaat gggctgttac agaaactagt tcgtgtttat atactatttc ctttgatgtc
4920
ctataagtcg gaaaagaaag gggcaaagag aacctattat ttgccagttt ttaagcagag
4980
ctcaatctat gccagctctc tggcatctgg ggttctgac tgataccagc agttgaagga
5040
agagagtgc tggcacctgg tgtgtaacga cacaatcagc acaactggag agaggcatta
5100
aagaaccagg gaaggtagtt tgatttttca ttgaattcta caagctaata ttgttccacg
5160
tatgtagtct tagaccaata gctgtaacta tcagctgcaa taccatgggt accagctggt
5220
acaaaagatt ttttctggtt ttatctgaaa catactggat ttatatatgt ataagcgct
5280
caatggggaa ttagagccag atgttatgat ttgttgctc ttttctttt atagttatag
5340
caaaaatatg gataatttct agtgaatgca taaattaggt tgcgtttctt attttgctt
5400
aaatctctgg tagtttttcc accctgtga cacaatccta atagacagtg tcctgtaaat
5460
ggacacaaca caataaagtc aagttattat tgctgttact ctggatgata tggaaaacac
5520

gaggaagtgt atacagagga ggaggaggag gagtcccagg aggaagagga ggaagaagac
 480
 agtgacgaag aggaaagaac aattg
 505

<210> 5534
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 5534
 Xaa Leu Ala Ser Leu Pro Ala Ser Gly Cys Leu Glu Cys Leu Val Leu
 1 5 10 15
 Gln Ala Pro Ser Gly Ser Asp Lys Ala Gly Thr Met Ser Thr Phe Gly
 20 25 30
 Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile Asp Glu Asp Glu Leu
 35 40 45
 Leu Ala Ser Leu Ser Ala Glu Glu Leu Lys Glu Leu Glu Arg Glu Leu
 50 55 60
 Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val Gly Leu Arg Gln Lys
 65 70 75 80
 Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe Ser Arg Glu Ala Leu
 85 90 95
 Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu Leu Glu Lys Glu Arg
 100 105 110
 Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys Glu Glu Ser Glu Glu
 115 120 125
 Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val Ser Glu Glu Val Tyr
 130 135 140
 Thr Glu Glu Glu Glu Glu Glu Ser Gln Glu Glu Glu Glu Glu Asp
 145 150 155 160
 Ser Asp Glu Glu Glu Arg Thr Ile
 165

<210> 5535
 <211> 1887
 <212> DNA
 <213> Homo sapiens

<400> 5535
 ngcacgagcc gagccttctc agacccgggg gacgcctaac cccgcgagat gaggaaactg
 60
 aggccgcgag agccgcacac agcagagaag cagcagaatc gggaatcaaa cccagctctg
 120
 tctgacccca gagcctgtgc ctttaaccac tggctaggct gaactgcctt tgttcttcac
 180
 tgtccccatc acctctttca aacctcagcc tctccttctc catcggtaca tctctaggct
 240
 gcacctgtct tctaaacatt cacacaaacc ctgcaaattt tcttcctcat aattgggaga
 300
 agactcactg gccgaatggc agcagtagat gacttgcaat ttgaagaatt tggcaatgca
 360
 gccacttctc tgacagcaaa cccagatgcc accacagtaa acattgagga tcttggtgaa
 420

340 345 350
 Thr Leu Ala Tyr Tyr Gly Tyr Pro Tyr Asn Ala Leu Ile Gly Pro Asn
 355 360 365
 Arg Asp Tyr Phe Val Lys Ala Gly Ser Ile Arg Gly Arg Gly Arg Gly
 370 375 380
 Ala Ala Gly Asn Arg Ala Pro Gly Pro Arg Gly Ser Tyr Leu Gly Gly
 385 390 395 400
 Tyr Ser Ala Gly Arg Gly Ile Tyr Ser Arg Tyr His Glu Gly Lys Gly
 405 410 415
 Lys Gln Gln Glu Lys Gly Tyr Glu Leu Val Pro Asn Leu Glu Ile Pro
 420 425 430
 Thr Val Asn Pro Val Ala Ile Lys Pro Gly Thr Val Ala Ile Pro Ala
 435 440 445
 Ile Gly Ala Gln Tyr Ser Met Phe Pro Ala Ala Pro Ala Pro Lys Met
 450 455 460
 Ile Glu Asp Gly Lys Ile His Thr Val Glu His Met Ile Ser Pro Ile
 465 470 475 480
 Ala Val Gln Pro Asp Pro Ala Ser Ala Ala Ala Ala Ala Ala Ala
 485 490 495
 Ala Ala Ala Ala Ala Val Ile Pro Thr Val Ser Thr Pro Pro Pro
 500 505 510
 Phe Gln Gly Arg Pro Ile Thr Pro Val Tyr Thr Val Ala Pro Asn Val
 515 520 525
 Gln Arg Ile Pro Thr Ala Gly Ile Tyr Gly Ala Ser Tyr Val Pro Phe
 530 535 540
 Ala Ala Pro Ala Thr Ala Thr Ile Ala Thr Leu Gln Lys Asn Ala Ala
 545 550 555 560
 Ala Ala Ala Ala Val Tyr Gly Gly Tyr Ala Gly Tyr Ile Pro Gln Ala
 565 570 575
 Phe Pro Ala Ala Ala Ile Gln Val Pro Ile Pro Asp Val Tyr Gln Thr
 580 585 590
 Tyr

<210> 5533

<211> 505

<212> DNA

<213> Homo sapiens

<400> 5533

ncacttgccct ccctgcctgc ttctggctgc cttgaatgcc tggtccttca agctccttct
 60
 gggctctgaca aagcagggac catgtctacc tttggctacc gaagaggact cagtaaatac
 120
 gaatccatcg acgaggatga actcctcgcc tccctgtcag ccgaggagct gaaggagcta
 180
 gagagagagt tggaagacat tgaacctgac cgcaaccttc ccgtggggct aaggcaaaa
 240
 agcctgacag agaaaacccc cacagggaca ttcagcagag aggcactgat ggcctattgg
 300
 gaaaaggagt cccaaaaact cttggagaag gagaggctgg gggaatgtgg aaaggttgca
 360
 gaagacaaag aggaaagtga ggaagagctt atctttactg aaagtaacag tgaggtttct
 420

tactttcttc tgggtttttg ttgggggttg ttgtttcggt gttttttggt ttttttttgg
 3000
 tttggttggg gaagtattgt cttctacgtg tgccattttc agtagcagag taagct
 3056

<210> 5532
 <211> 593
 <212> PRT
 <213> Homo sapiens

<400> 5532
 Met Thr Ala Glu Asp Ser Thr Ala Ala Met Ser Ser Asp Ser Ala Ala
 1 5 10 15
 Gly Ser Ser Ala Lys Val Pro Glu Gly Val Ala Gly Ala Pro Asn Glu
 20 25 30
 Ala Ala Leu Leu Ala Leu Met Glu Arg Thr Gly Tyr Ser Met Val Gln
 35 40 45
 Glu Asn Gly Gln Arg Lys Tyr Gly Gly Pro Pro Pro Gly Trp Glu Gly
 50 55 60
 Pro His Pro Gln Arg Gly Cys Glu Val Phe Val Gly Lys Ile Pro Arg
 65 70 75 80
 Asp Val Tyr Glu Asp Glu Leu Val Pro Val Phe Glu Ala Val Gly Arg
 85 90 95
 Ile Tyr Glu Leu Arg Leu Met Met Asp Phe Asp Gly Lys Asn Arg Gly
 100 105 110
 Tyr Ala Phe Val Met Tyr Cys His Lys His Glu Ala Lys Arg Ala Val
 115 120 125
 Arg Glu Leu Asn Asn Tyr Glu Ile Arg Pro Gly Arg Leu Leu Gly Val
 130 135 140
 Cys Cys Ser Val Asp Asn Cys Arg Leu Phe Ile Gly Gly Ile Pro Lys
 145 150 155 160
 Met Lys Lys Arg Glu Ile Leu Glu Glu Ile Ala Lys Val Thr Glu
 165 170 175
 Gly Val Leu Asp Val Ile Val Tyr Ala Ser Ala Ala Asp Lys Met Lys
 180 185 190
 Asn Arg Gly Phe Ala Phe Val Glu Tyr Glu Ser His Arg Ala Ala Ala
 195 200 205
 Met Ala Arg Arg Lys Leu Met Pro Gly Arg Ile Gln Leu Trp Gly His
 210 215 220
 Gln Ile Ala Val Asp Trp Ala Glu Pro Glu Ile Asp Val Asp Glu Asp
 225 230 235 240
 Val Met Glu Thr Val Lys Ile Leu Tyr Val Arg Asn Leu Met Ile Glu
 245 250 255
 Thr Thr Glu Asp Thr Ile Lys Lys Ser Phe Gly Gln Phe Asn Pro Gly
 260 265 270
 Cys Val Glu Arg Val Lys Lys Ile Arg Asp Tyr Ala Phe Val His Phe
 275 280 285
 Thr Ser Arg Glu Asp Ala Val His Ala Met Asn Asn Leu Asn Gly Thr
 290 295 300
 Glu Leu Glu Gly Ser Cys Leu Glu Val Thr Leu Ala Lys Pro Val Asp
 305 310 315 320
 Lys Glu Gln Tyr Ser Arg Tyr Gln Lys Ala Ala Arg Gly Gly Gly Ala
 325 330 335
 Ala Glu Ala Ala Gln Gln Pro Ser Tyr Val Tyr Ser Cys Asp Pro Tyr

cccagctacg tgtactcctg cgacccctac aactggcct actacggcta cccctacaac
1380
gcgctcattg ggcccaacag ggactacttt gtgaaagcag gcagcataag aggccgaggg
1440
cgaggtgcag ctggcaacag agccccaggg cctaggggtt cctacctcg gggatattct
1500
gctggccgtg gtatatatag ccgatatcat gaagggaaag gaaagcagca agaaaaagga
1560
tatgaactgg tgccgaattt ggaaatccct accgtcaacc cagttgccat taaacctgg
1620
acagtagcca tccctgccat tggggctcag tattccatgt ttccagcagc tccagccct
1680
aaaatgattg aagatggcaa aatccacaca gtggagcaca tgatcagccc cattgctgtg
1740
cagccagacc cagccagtgc tgctgccgcc gcagccgcgg ccgcagccgc cgcagccgt
1800
gtcattccca ctgtgtcgac gccaccacct ttccagggcc gcccaataac tccagtatac
1860
acggtggctc caaacgttca gagaattcct actgccggga tctacggggc cagttacgtg
1920
ccatttgctg ctccagctac agccacgac gccacactac agaagaacgc ggcagccgcg
1980
gccgcccgtg atggaggata cgcaggctac atacctcagg ccttccctgc tgctgccatt
2040
caggtcccca tccccgacgt ctaccagaca tactgaggct ggtgaccagc acgaagacag
2100
accacacaaa caccactgaa ggaacgcttg actatttatg aagaaggaac atgttggatt
2160
cacacatgca acctgaaagt gaagaatgtt agcagattta tttctgaatt attttatata
2220
catgaagttt tctactagttt ttttaagacta ttttcaactt agcatgccta cgttcataca
2280
tttccaaaag acttgcaatg gttcgtgcct tcattccatc ttttaaaaat ttgtatgctg
2340
tactacattt gtatagaggt ttttgttgtt gtttttttaa ggatataatt tcagtatgaa
2400
ggttattttc ttaacttctg cactccagag atttctattt tgtagtacct tcaataatat
2460
atcaactata tattaataaa gcacacttga ggagctaggg aactattttg aaaaatatat
2520
acaatattta aagatacaaa cagtagtgct taaaaatact acataaagca ttatttttaa
2580
ggttatactg gaaagtgcag ttttaaaatg agtaaaacct ctgtatttct gctggcatta
2640
agggttgatg gtgttaccat gtatcatcat ggcggtacta ttttttaaaa gaaattaaac
2700
actggatctc tccttaagcc aacattgaaa agacttgccg cacttctgag tccaaacact
2760
ggaaaagctc cctttgccac cgtagccgg ggctcattct ccagtgcct tagccttaaa
2820
catgcacca ctcccacatc tctcaccctg tcccctctc cccagattcc caatcccacc
2880
gcaatgtttg gcaagcctag gactgataag tagctctgat agaggagctg gtggctttta
2940

580 585 590
 Thr Ser Gly Lys Arg Thr Ile Ser Thr Gln Thr
 595 600

<210> 5531
 <211> 3056
 <212> DNA
 <213> Homo sapiens

<400> 5531
 gccccgtccg cgtgacgctc ctgcctgcgc gcggccaagc catgctccgc cccagctcag
 60
 gtaacggagg ccttggaag agactctgcg tcaggtcacc cagcagagat cagcaatcct
 120
 tggctcactg aggaggtttg gatttgccctc aaagggcact gcaaaaattg aacagaggaa
 180
 tccaagga gctgcctgaa ttgacctgta tactctcgtt ctgcgactta taaaggacca
 240
 gacaaatcaa attagtgggt ttggtttccg ccagctgtgg atgcctttga cattatgacc
 300
 gcagaggatt ccaccgcagc catgagcagt gactcggccg ccgggtcctc ggccaagggtg
 360
 cccgagggcg tggcgggcgc gcccaacgag gcagcactgc tggcgctgat ggagcgcacg
 420
 ggctacagca tggtgcaaga gaacgggcag cgcaagtacg gcggcccacc gcccggtggtg
 480
 gagggccgc acccgcagcg tggctgcgag gtcttcgtgg gcaagatccc gcgcgacgtg
 540
 tacgaggacg agctgggtgcc cgtgttcgag gccgtgggccc gcatctacga gctgcgcctc
 600
 atgatggact ttgacggcaa gaaccgcggc tacgccttcg tcatgtactg ccacaagcac
 660
 gaggccaagc gcgcagtgcg tgagctcaac aactacgaga tccgcccggg ccgcctgctc
 720
 ggcggtgtgt gcagcgtgga caactgccgc ctcttcacgc gcgggatccc caagatgaag
 780
 aagcgcgagg aaatcctgga ggagattgcc aaggtcaccg agggcggtgt ggacgtgatc
 840
 gtctacgcca gcgcggccga caagatgaag aaccgcgggt tcgccttcgt ggagtacgag
 900
 agccaccgcg cggctgccat ggctcgccgc aagctcatgc ctggccgcat ccagctgtgg
 960
 ggccaccaga tcgccgtgga ctgggcccag cctgagatcg acgtggacga ggacgtgatg
 1020
 gagaccgtga agatcctcta cgtgcgcaac ctcatgatcg agaccaccga ggacaccatc
 1080
 aagaagagct tcggccagtt caaccccggc tgcgtggagc gcgtcaagaa gatccgcgac
 1140
 tacgccttcg tgcaacttcac cagccgcgag gatgccgtgc atgccatgaa caacctcaac
 1200
 ggcaactgagc tggagggctc gtgcctggag gtcacgctgg ccaagcccgt ggacaaggag
 1260
 cagtactcgc gctaccagaa ggcagccagg ggcggcggcg cggctgaggc agcgcagcag
 1320

4709

actcagacat gatggctgct acattgtgta aagaactggg cttagcctat caaatgggtct
 1860
 gtggacttac ttggaaaaac tgatttgaaa ctttcacaga tctcagcttt catctgatgt
 1920
 cacttttcat gatcttctca ttggccccct taacctgggc tgaagttctg ggatgttttc
 1980
 agtttgatca gtctgatact cagtggcact ttattaaaac atcagctgtg gagtgtggcg
 2040
 gtgcacacct gtagtcccag ctgctcagga ggctgaggca ggaggatctc ttgagcccag
 2100
 gattttgaat ccatcgtgga caacatagca agattccatc tctaaaaaaa atgaaaataa
 2160
 acataagcca caaggaatgg gtgaaagatt attgtaatgt gctttaacta aataggtaaa
 2220
 tatactaaac aaatgctaaa actcagtttt aggatgaaac cattgttgat atccacatca
 2280
 gtccctgttt agaaaacatt taaaatgact tttagttatg tacagtacgt tggcaatgaa
 2340
 tacattaagc ttcaaaattt ggtagtgctc tcgaatatgt atatttgat ttttcaagcg
 2400
 aagttctctt attcacatat aaattaaagt gggttggtac tgatatcaaa aaatgtttat
 2460
 gtttttagaa cagacatttc agtcaactgca ttcttaggta ttccaaacca aatatgatga
 2520
 catcaataga ttgcatttta aaaatattgt ttgatttttc tattttcaaa aataaaattc
 2580
 tgtttctaac taaaaaaaaa aa
 2602

<210> 5530

<211> 603

<212> PRT

<213> Homo sapiens

<400> 5530

Xaa Ala His Leu Leu Trp Gly Gly Lys Gly His Lys Val Phe Phe Phe
 1 5 10 15
 Phe Phe Phe Leu Ala Met Ala Val Pro Gly Val Gly Leu Leu Thr Arg
 20 25 30
 Leu Asn Leu Cys Ala Arg Arg Arg Thr Arg Val Gln Arg Pro Ile Val
 35 40 45
 Arg Leu Leu Ser Cys Pro Gly Thr Val Ala Lys Asp Leu Arg Arg Asp
 50 55 60
 Glu Gln Pro Ser Gly Ser Val Glu Thr Gly Phe Glu Asp Lys Ile Pro
 65 70 75 80
 Lys Arg Arg Phe Ser Glu Met Gln Asn Glu Arg Arg Glu Gln Ala Gln
 85 90 95
 Arg Thr Val Leu Ile His Cys Pro Glu Lys Ile Ser Glu Asn Lys Phe
 100 105 110
 Leu Lys Tyr Leu Ser Gln Phe Gly Pro Ile Asn Asn His Phe Phe Tyr
 115 120 125
 Glu Ser Phe Gly Leu Tyr Ala Val Val Glu Phe Cys Gln Lys Glu Ser
 130 135 140
 Ile Gly Ser Leu Gln Asn Gly Thr His Thr Pro Ser Thr Ala Met Glu

cttaggagag acgagcagcc ttcagggagc gtggagacag gttttgaaga caagattccc
240
aaaaggagat, tctctgagat gcaaaatgaa agacgagaac aggcacagcg gactgtttta
300
atacattgcc cagagaaaat cagtgaaaac aagtttctta aatatttatc ccaatttgga
360
cctattaata atcatttctt ctatgaaagc tttggctctt atgctgtcgt agaattttgc
420
caaaaggaaa gcatagggtc actgcagaat gggactcata ctccaagcac ggccatggag
480
actgcaattc cattcagatc acgtttcttc aatctgaagt tgaaaaacca gacttctgaa
540
cggtcacgcg tacgggtcaag taatcagttg ccacgttcaa acaagcagct ttttgaatta
600
ctttgttatg cagaaagtat agacgatcag ctgaacactc tcttgaagga gttccagcta
660
acagaggaga aactaagct ccgatatctc acctgttctc ttattgaaga catggccgcc
720
gcgtattttc cagactgcat agtcagaccc tttggctcct cagtcaacac ttttgggaag
780
ttaggatgtg atttggacat gtttttggat ctatgatgaaa ccagaaacct cagcgctcac
840
aagatctcag gaaattttct gatggaattt caagtgaaaa atgttccttc agaaagaatt
900
gcaactcaga agatcctgtc tgtgttagga gagtgccttg accacttttg ccctggctgt
960
gtgggtgtgc aaaaaatatt aaatgcccg tgtccgctcg tgaggttctc acaccaggcc
1020
tccggatttc agtgtgattt gactacgaac aataggattg ccttgacaag ttccgaactc
1080
ctttatatat atggtgccct agactcaaga gtgagagcct tgggtgttcag tgtacggtgc
1140
tgggctcgag cacattcact aacaagtagt attcctgggtg catggattac aaattttctc
1200
cttacaatga tggatcatctt ttttctccag agaagatcac cccctattct tccaacacta
1260
gattccttaa aaaccctagc agatgcagaa gataaatgtg taatagaagg caacaactgc
1320
acatttggtc gtgacttgag tagaattaaa ctttcacaga acacagaaac attagaatta
1380
ctactgaagg aattttttga gtattttggc aattttgctt tcgataaaaa ttccataaat
1440
attcgacagg gaaggagca aaacaaacct gattcttctc ctctgtacat tcagaatcca
1500
tttgaaactt ctctcaacat aagcaaaaat gtaagtcaaa gccagctgca aaaatttgta
1560
gatttggccc gagaaagtgc ctggatttta caacaggaag atacagatcg accttcata
1620
tcaagtaatc ggccctgggg gctgggtatcc ctattgctac catctgctcc aaacagaaag
1680
tcctttacca agaagaaaag caataagttt gcaattgaaa cagtcaaaaa cttgctagaa
1740
tctttaaaag gtaacagAAC agaaaatttc acaaaaacca gtgggaagag aacaattagT
1800

gttgtgttcc cgagactaca ggataaaaaa tactatgata agaaatacca agtattcctg
 480
 aagctggttg aacaccagaa ggagtatttg gcgatcatga atgatgactg aacagggctt
 540
 gcaggtgctg atgccagaag cttatgtgcc attgcattaa agacttctgt catttgatcc
 600
 atgttcaaga cccttgaggt attgtttcat catttctgta ttgtctttca ataaagaaaa
 660
 caaacatgtg caaccagaaa aaaaaaaaaa aaaaataaaa aaaaaaaaaa aaaaaaaaaa
 720
 aaaaaaaaaa
 728

<210> 5528
 <211> 176
 <212> PRT
 <213> Homo sapiens

<400> 5528
 Xaa Asp Leu Thr Leu Lys Gly Met Arg Thr Thr Gly Tyr Leu Tyr Ile
 1 5 10 15
 Pro Ala Leu Ala Leu His Ser Pro Ser Ser Leu Leu Ser Pro Gln
 20 25 30
 Val Thr Gly Leu Lys Leu Ser Gln Asp Leu Asp Asp Leu Ala Ile Leu
 35 40 45
 Tyr Leu Ala Thr Val Gln Ala Ile Ala Leu Gly Thr Arg Phe Ile Ile
 50 55 60
 Glu Ala Met Glu Ala Ala Gly His Ser Ile Ser Thr Leu Phe Leu Cys
 65 70 75 80
 Gly Gly Leu Ser Lys Asn Pro Leu Phe Val Gln Met His Ala Asp Ile
 85 90 95
 Thr Gly Met Pro Val Val Leu Ser Gln Glu Val Glu Ser Val Leu Val
 100 105 110
 Gly Ala Ala Val Leu Gly Ala Cys Ala Ser Gly Asp Phe Ala Ser Val
 115 120 125
 Gln Glu Ala Met Ala Lys Met Ser Lys Val Gly Lys Val Val Phe Pro
 130 135 140
 Arg Leu Gln Asp Lys Lys Tyr Tyr Asp Lys Lys Tyr Gln Val Phe Leu
 145 150 155 160
 Lys Leu Val Glu His Gln Lys Glu Tyr Leu Ala Ile Met Asn Asp Asp
 165 170 175

<210> 5529
 <211> 2602
 <212> DNA
 <213> Homo sapiens

<400> 5529
 nntgccacc ttttgtgggg ggggaaagga cacaaggttt tttttttttt ttttttttta
 60
 gcaatggcgg ttcccggcgt ggggctcttg acccgtttga acctgtgtgc ccggagaaga
 120
 actcgagtcc agcggcctat cgtcaggctt ttgagttgcc cagggaactgt ggccaaagac
 180

acccagctgg agtcatggga ggagcccttc atgcctgctt gggaagttgt gacttcagcc
 480
 ataccgagag aaactctgag gatggccttt atgagggagc tggcaattga acatcattca
 540
 tctaaatatg cacactggag gcaagatgag aattcctgac agattgtcct tcttgagaag
 600
 acagccctct gccttggagc tccagagaga gggagccctg tattcttggc tgtaccgctc
 660
 gaatggagtt ttgatctcgc tgagtttggg gttgggggag gaaaggagtg gtcttggttc
 720
 aaatgtgact cacttttgct gttcttgtga atgtagatc t
 761

<210> 5526

<211> 102

<212> PRT

<213> Homo sapiens

<400> 5526

Val	Thr	Phe	Glu	Asp	Val	Ala	Val	Tyr	Phe	Ser	Gln	Glu	Glu	Trp	Arg
1				5					10					15	
Leu	Leu	Asp	Asp	Ala	Gln	Arg	Leu	Leu	Tyr	Arg	Asn	Val	Met	Leu	Glu
			20				25						30		
Asn	Phe	Thr	Leu	Leu	Ala	Ser	Leu	Gly	Leu	Ala	Ser	Ser	Lys	Thr	His
		35				40						45			
Glu	Ile	Thr	Gln	Leu	Glu	Ser	Trp	Glu	Glu	Pro	Phe	Met	Pro	Ala	Trp
	50				55					60					
Glu	Val	Val	Thr	Ser	Ala	Ile	Pro	Arg	Glu	Thr	Leu	Arg	Met	Ala	Phe
65				70					75					80	
Met	Arg	Glu	Leu	Ala	Ile	Glu	His	His	Ser	Ser	Lys	Tyr	Ala	His	Trp
			85					90						95	
Arg	Gln	Asp	Glu	Asn	Ser										
			100												

<210> 5527

<211> 728

<212> DNA

<213> Homo sapiens

<400> 5527

nnagatctga cactaaaggg catgagaacc actggatata tgtatatattcc ggctttggca
 60
 gcgttgcaact ctcccagttc tctactctcc cctcagggtca ccggattgaa actgtctcag
 120
 gaccttgatg atcttgccat tctctacctg gccacagttc aagccattgc tttggggact
 180
 cgcttcatta tagaagccat ggaggcagca gggcactcaa tcagtactct tttcctatgt
 240
 ggaggcctca gcaagaatcc cctttttgtg caaatgcatg cggacattac tggcatgcct
 300
 gtggctctgt cgcaagaggt ggagtcctgt cttgtgggtg ctgctgttct gggtgccctgt
 360
 gcctcagggg atttcgcttc tgtacaggaa gcaatggcaa aaatgagcaa agttgggaaa
 420

Tyr Gln Cys Val Thr Gly Asn Asn Gly Ser Glu Ser Ser Pro Ala Thr
 945 950 955 960
 Thr Gly Ala Leu Ser Thr Gly Ser Pro Pro Arg Glu Asn Pro Ser His
 965 970 975
 Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys Asn Pro
 980 985 990
 Ser His Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys
 995 1000 1005
 Asn Pro Ser His Pro Thr Ala Ser Thr Leu Ser Met Gly Leu Pro Pro
 1010 1015 1020
 Ser Arg Thr Pro Ser His Pro Thr Ala Thr Val Leu Ser Thr Gly Ser
 1025 1030 1035 1040
 Pro Pro Ser Glu Ser Pro Ser Arg Thr Gly Ser Ala Ala Ser Gly Ser
 1045 1050 1055
 Ser Asp Ser Ser Ile Tyr Leu Thr Ser Ser Val Tyr Ser Ser Lys Ile
 1060 1065 1070
 Ser Gln Asn Gly Gln Gln Ser Gln Asp Val Gln Lys Lys Glu Thr Phe
 1075 1080 1085
 Pro Asn Val Ala Glu Glu Pro Ile Trp Arg Met Ile Arg Gln Thr Pro
 1090 1095 1100
 Glu Arg Ile Leu Met Thr Tyr Gln Val Pro Glu Arg Val Lys Glu Val
 1105 1110 1115 1120
 Val Leu Lys Glu Asp Leu Glu Lys Leu Glu Ser Met Arg Gln Gln Gln
 1125 1130 1135
 Pro Gln Phe Ser His Gly Gln Lys Glu Glu Leu Ala Lys Val Tyr Asn
 1140 1145 1150
 Trp Ile Gln Ser Gln Thr Val Thr Gln Glu Ile Asp Ile Gln Ala Cys
 1155 1160 1165
 Val Thr Cys Glu Asn Glu Asp Ser Ala Asp Gly Ala Ala Thr Ser Cys
 1170 1175 1180
 Gly Gln Val Leu Val Glu Asp Ser Cys
 1185 1190

<210> 5525

<211> 761

<212> DNA

<213> Homo sapiens

<400> 5525

nggatccaag gtgagttgtc tggcaagaga agagtaggac tctgcatacc atgcccagag
 60
 ctgagatgga ctttatctgc ctacctgcct ctgcttgctc agtggaaca tgaggagaga
 120
 gtgggcatca gtggttctgg ggcagggtct ctcttctgag atggggatta aggaagaggg
 180
 tgagcagggg tggatgttta gggggatgcc taaattcccc agtaaggaga ccgcagataa
 240
 actcaactct gtccatctta gcagggtat gtgacctttg aggatgtggc tgtctacttc
 300
 tcccaggagg aatggagatt gcttgatgac gctcagaggc tcctctaccg caatgtgatg
 360
 ctggagaact ttacacttct ggcctctctg ggacttgcgt cttccaagac ccatgaaata
 420

Tyr Thr Glu Pro Cys Glu Asp Leu Arg Asn Asp Glu His Ser Pro Ser
 515 520 525
 Tyr Gln Gln Ile Asn Cys Ile Asp Ser Val Ile Arg Tyr Leu Lys Ser
 530 535 540
 Tyr Asn Ile Pro Ala Leu Lys Arg Lys Cys Ile Ser Cys Thr Asn Thr
 545 550 555 560
 Thr Ser Ser Ser Ser Glu Glu Asp Lys Gln Asn His Lys Ala Asp Asp
 565 570 575
 Val Gln Ala Leu Gln Gly Asn Lys Asn Ala Pro Gln Lys Met Pro Thr
 580 585 590
 Asn Gly Arg Ser Ile Asp Thr Gly Gly Gly Ala Pro Gln Ile Leu Ser
 595 600 605
 Thr Ala Met Leu Ser Leu Gly Ser Gly Ile Ser Gln Cys Gly Tyr Ser
 610 615 620
 Ser Thr Ile Val His Val Pro Pro Pro Glu Thr Ala Arg Asp Ala Thr
 625 630 635 640
 Leu Phe Cys Glu Pro Trp Thr Leu Asn Met Gln Pro Ala Pro Leu Thr
 645 650 655
 Ser Glu Glu Phe Lys His Val Gly Leu Thr Ala Ala Val Leu Ser Ala
 660 665 670
 His Thr Gln Lys Glu Glu Gln Asn Tyr Val Asp Lys Phe Arg Glu Lys
 675 680 685
 Ile Leu Ser Ser Pro Tyr Ser Ser Tyr Leu Gln Gln Glu Ser Arg Ser
 690 695 700
 Lys Ala Lys Tyr Ser Tyr Phe Gln Gly Asp Ser Thr Ser Lys Gln Thr
 705 710 715 720
 Arg Ser Ala Gly Cys Arg Lys Gly Lys His Lys Arg Lys Lys Leu Pro
 725 730 735
 Glu Pro Pro Asp Ser Ser Ser Ser Asn Thr Gly Ser Gly Pro Arg Arg
 740 745 750
 Gly Ala His Gln Asn Ala Gln Pro Cys Cys Pro Ser Ala Ala Ser Ser
 755 760 765
 Pro His Thr Ser Ser Pro Thr Phe Pro Pro Ala Ala Met Val Pro Ser
 770 775 780
 Gln Ala Pro Tyr Leu Val Pro Ala Phe Pro Leu Pro Ala Ala Thr Ser
 785 790 795 800
 Pro Gly Arg Glu Tyr Ala Ala Pro Gly Thr Ala Pro Glu Gly Leu His
 805 810 815
 Gly Pro Pro Leu Ser Glu Gly Leu Gln Pro Tyr Pro Ala Phe Pro Phe
 820 825 830
 Pro Tyr Leu Asp Thr Phe Met Thr Val Phe Leu Pro Asp Pro Pro Val
 835 840 845
 Cys Pro Leu Leu Ser Pro Ser Phe Leu Pro Cys Pro Phe Leu Gly Ala
 850 855 860
 Thr Ala Ser Ser Ala Ile Ser Pro Ser Met Ser Ser Ala Met Ser Pro
 865 870 875 880
 Thr Leu Asp Pro Pro Ser Val Thr Ser Gln Arg Arg Glu Glu Glu
 885 890 895
 Lys Trp Glu Ala Gln Ser Glu Gly His Pro Phe Ile Thr Ser Arg Ser
 900 905 910
 Ser Ser Pro Leu Gln Leu Asn Leu Leu Gln Glu Glu Met Pro Arg Pro
 915 920 925
 Ser Glu Ser Pro Asp Gln Met Arg Arg Asn Thr Cys Pro Gln Thr Glu
 930 935 940

4702

catgatgacc atcctcatag ctcagatctc ctttcaaagt agtggctttc tggatggtaa
 5220
 ttccatctta aggtgtcaga actattttca aatgctgcct ttgacagttc ttggaatttt
 5280
 ctgatattaa gcagttccat gcaaatttc gtgttttata aatagctctc atagtctgct
 5340
 ccatcttgat agttaagtga tttctgaagc gtttgtgtgt gtgttgatca ggttgtgtga
 5400
 tatttttgc tgaataagaa tcaaatttga aacaattaac cagccagtag attgtctgtc
 5460
 agtgaccttc ttagtaata aagtttttgc cactgtaaat aaaaacagta tccgtagcta
 5520
 tcaggatcat tgcgcactca tatatgctaa gccttctggt ctctaataga agcctttctt
 5580
 ttccattggt tctggatatt tgtattatcc aaatgtgctt atttctttgc cttagcacac
 5640
 gttttatgga gtacttgta tactaggttt gatttgaaac tggtgcttgt cgcagaactg
 5700
 tcagagcatg aggagcgctc ctctgtggg tggacgcatt cagcactcc caggttgcac
 5760
 ctgctgctgg cggtgagcag ggggttcagc agcttgaccg atgcccccg agggggctct
 5820
 cccagctta aactttgttg tttaaatttg ttaacttttt atattaatga ctattgaaag
 5880
 tggaataaaa aatttatatt ataggcttca atgttttcat gaatgttacc caaaaagctg
 5940
 tgttttcttt ggtcagaggt caaaatttat gaaaaacaaa atgctgtatg aatggaaatc
 6000
 attttgcaat tgagtgcac ttcattgtaa ttcacagtgt aaatttaatc caaactgaaa
 6060
 ttttgtttca actgaatttg taattaactc tgaatttggt tttaatcatt agtaatat
 6120
 cagttgggta tctttttaag taaaaacaac aaataaactc tgtacatgta aaacgtgaaa
 6180
 aaaaaaaaaa
 6190

<210> 5524

<211> 1193

<212> PRT

<213> Homo sapiens

<400> 5524

Met	Pro	Arg	Gly	Glu	Ala	Pro	Gly	Pro	Gly	Arg	Arg	Gly	Ala	Lys	Asp
1				5				10					15		
Glu	Ala	Leu	Gly	Glu	Glu	Ser	Gly	Glu	Arg	Trp	Ser	Pro	Glu	Phe	His
		20					25					30			
Leu	Gln	Arg	Lys	Leu	Ala	Asp	Ser	Ser	His	Ser	Glu	Gln	Gln	Asp	Arg
		35				40					45				
Asn	Arg	Val	Ser	Glu	Glu	Leu	Ile	Met	Val	Val	Gln	Glu	Met	Lys	Lys
		50				55					60				
Tyr	Phe	Pro	Ser	Glu	Arg	Arg	Asn	Lys	Pro	Ser	Thr	Leu	Asp	Ala	Leu
65				70				75					80		
Asn	Tyr	Ala	Leu	Arg	Cys	Val	His	Ser	Val	Gln	Ala	Asn	Ser	Glu	Phe

aaagaagacc tggaaaagct agaaagtatg aggcagcagc agccccagtt ttctcatggg
3600
caaaaggagg agctggctaa ggtgtataat tggattcaaa gccagactgt cactcaagaa
3660
atcgacattc aagcctgtgt cacttgtgaa aatgaagatt cagctgatgg tgcggccaca
3720
tcctgtggtc aggttctggt agaagacagc tgttgagtga ctgtgaggat gaaccttcat
3780
accctttcca agacgtgtta cacagacaga cctttttaag tcctggactt ttaaatgacc
3840
atgaagtat cattgaatgt taagattttt tcttcttgat tttttaatac acgtaatctt
3900
tttgaagcag acattgtata cagaatctta cttctctttg ttcttgatat attaaaatgg
3960
ccagttaggc tctttttgta gttgaattgt cttctaaaga gattggatgg cctctaaaga
4020
ggtatgtgta tctttatttc agatgtcacc cagagtaaata tataattaga agtatagcta
4080
gaatgagccc caaaccttag cctcatttat tttgttctgt tacataagtc attttccctt
4140
tagagtgtt gaagaaatgc cacctacagg ttgtgtactt ttcataatgg tttccatgaa
4200
tgtagtacgt tcatacaggc ttcattcaac ctggcggtcc cctccataat taagatgaaa
4260
cattccggtt ttctcacaac acattagcac atactgtcca ttagcatatc tgggataacc
4320
aggttttggg ggttgagttt tggccttcat ccttgtagat ccctttccta ttgatttccc
4380
accttccagt gaaattctga aagtcttctc ttaaaaatcg atccgcttac catgggccta
4440
ttcttgtaag ttctagttag catttgcatg tgtaatatta aaatgaaaga gcttcttacc
4500
cagtgtgtt gcccttttga gtatttttgt ttttaaaata atgattgtaa aatgttttac
4560
aagtaatgta aaagctagta tcattcttac atacttctgt gtttaaattt tcattcttac
4620
caaaacagtt aactctttct ttccaatcaa ttatacaaa agaggtcgct ccagccctac
4680
cacaggctctg actggcactg ccttttggtt gcccttgaac agggcagtg tgtggggact
4740
gcaaaagaga aaacgtccag gcgagcccag ttgtcctcgc ccacagggtc ctgcaggctc
4800
catcagtcac cgctttctat ggcgtttgta gttgtgtctt ttaagaagtg agtgtgattg
4860
tttacttgat aaatcagctc actctctggt gctttttaga gaagtcctg attccttctt
4920
aaacttgga tgatagatga aattcacacc cctgcagatc agaaaaaaca aatagaagaa
4980
aatgagggtt acagtaacct gttgtcttta tataacttgc aacaaactaa tttatttttt
5040
tttctttttt ttgtttttgg ttttttatgg ttttttaagg aaaatacttt tctcctttga
5100
agttttacag ctttttgtaa atgcgtcctg ataatgatta ggaaaatcga ccttttctac
5160

aacaagaatg cccctcagaa aatgccaaaca aatggacggt ccatagacac aggaggagga
1980
gctccacaga tctgtccac ggcatgctg agcttgggt cgggcataag ccaatgcggt
2040
tacagcagca ccattgtcca tgtcccaccc ccagagacag ccagggatgc taccctcttc
2100
tgtgagccct ggaccctgaa catgcagcca gccccttga cctcggaaga atttaaacac
2160
gtggggctca cagcggctgt tctgtcagcg cacaccaga aggaagagca gaattatgtt
2220
gataaattcc gagaaaagat cctgtcatca ccctacagct cctatcttca gcaagaaagc
2280
aggagcaaag ctaaattatc atattttcaa ggagattcta cttccaagca gacgcggtcg
2340
gccggctgca ggaaagggaa gcacaagcgg aagaagctgc cggagccgcc agacagcagc
2400
agctcgaaca ccggctctgg tccccgcagg ggagcgcac agaacgcaca gccctgctgc
2460
ccctccgagg cctcctctcc gcacacctcg agcccgacct tcccacctgc cgccatggtg
2520
cccagccagg ccccttacct cgtcccagct tttccctcc cagccgcgac ctcacccgga
2580
agagaatacg cagcccccg aactgcaccg gaaggcctgc atgggcccgc cttgtccgag
2640
ggcttgacgc cttaccacgc tttccctttt cttacttgg atacttttat gaccgttttc
2700
ctgcctgacc ccctgtctg tctctgttg tgccatcgt ttttgccatg tccattcctg
2760
ggggcgacag cctcttctgc gatatcacc tcaatgtcgt cagcaatgag tccaactctg
2820
gaccaccccc cttcagtcac cagccaaagg agagaggagg aaaagtggga ggcacaaagc
2880
gaggggcacc cgttcattac ttcgagaagc agctcacctc tgcagttaaa cttacttcag
2940
gaagagatgc ccagaccctc tgaatctcca gatcagatga gaaggaacac gtgcccacaa
3000
actgagtatc agtgtgttac aggcaacaat ggcagtgaga gcagtccctg tactaccggt
3060
gcactgtcca cggggtcacc tcccaggagg aatccatccc atcctactgc cagcgctctg
3120
tccacaggat cgctcccat gaagaatcca tccatccta ctgccagcgc tctgtccaca
3180
ggatcgctc ccatgaagaa tccatcccat cctactgcca gcacactgtc catgggattg
3240
cctcccagca ggactccatc ccatcctact gccactgttc tgtccacggg gtcacctccc
3300
agcgaatccc catccagaac tgggtcagca gcacaggaa gcagcgacag cagtatatac
3360
cttactagta gtgtttattc ttctaaaatc tcccaaatg ggcagcaatc tcaggacgta
3420
cagaaaaaag aaacatttcc taatgtcgcc gaagagccca tctggagaat gatacggcag
3480
acacctgagc gcattctcat gacataccag gtacctgaga gggttaaaga agttgtacta
3540

agtgaacagc aagatcgaaa cagagtttct gaagaactta tcatggttgt ccaagaaatg
360
aaaaaatact tcccctcgga gagacgcaat aaaccaagca ctctagatgc cctcaactat
420
gctctccgct gtgtccacag cgttcaagca aacagtgagt tttccagat tctcagtcag
480
aatggagcac ctcaggcaga tgtgagcatg tacagtcttg aggagctggc cactatcgct
540
tcagaacaca cttccaaaaa cacagatacc tttgtggcag tattttcatt tctgtctgga
600
aggtttagtg acatttctga acaggctgct ttgatcctga atcgtaagaa agatgtcctg
660
gcgtcttctc actttgttga cctgcttgca cctcaagaca tgaggggtatt ctacgcgcac
720
actgccagag ctcagcttcc tttctggaac aactggaccc aaagagctgc acggtatgaa
780
tgtgtccgg tgaaaccttt tttctgcagg atccgtggag gtgaagacag aaagcaagag
840
aagtgtcact ccccatccg gatcatcccc tatctgattc atgtacatca ccctgcccag
900
ccagaattgg aatcggaacc ttgctgtctc actgtggttg aaaagattca ctctggttat
960
gaagctcttc ggatcccagt gaataaaaaga atcttcacca ccacacacac cccaggggtg
1020
gtttttcttg aagtagatga aaaagcagtg cctttgctgg gttacctacc tcaggacctg
1080
attggaacat cgatcctaag ctacctgcac cctgaagatc gttctctgat ggttgccata
1140
caccaaaaag ggcacctcc ctttgaacat tctccattc gattttgtac tcaaaacgga
1200
gactacatca tactggattc cagttggtcc agctttgtga atccctggag ccggaagatt
1260
tctttcatca ttggtcggca taaagtctga acgagccac taaatgagga tgtttttgct
1320
accaaaatta aaaagatgaa cgataatgac aaagacataa cagaattaca agaacaaatt
1380
tacaaacttc tcttacagcc agttcacgtg agcgtgtcca gcggctacgg gagcctgggg
1440
agcagcgggt cgcaggagca gcttgtcagc atcgctcctt ccagtgaggc cagtgggcac
1500
cgtgtggagg agacgaaggc ggagcagatg accttgcagc aggtctatgc cagtgtgaac
1560
aaaattaaaa atctgggtca gcagctctac attgagtcaa tgaccaaata atcattcaag
1620
ccagtgcgg ggacacgcac agaaccgaat ggtgggtggg aatgtaagac ctttacttcc
1680
ttccacaaa cactgaaaaa caatagtgtg tacactgagc cctgtgagga tttgaggaac
1740
gatgagcaca gcccatccta tcaacagatc aactgtatcg acagtgtcat cagatacctg
1800
aagagctaca acattccagc tttgaaaaga aagtgtatct cctgtacaaa tacaacttct
1860
tcctctcag aagaagacaa acagaaccac aaggcagatg atgtccaagc cttacaaggt
1920

```
<210> 5523
<211> 6190
<212> DNA
<213> Homo sapiens
```

```
<400> 5523
naaaacctcc tgggaaataa ccgtgacccc ctggctcgtg ggggccgcct gttctcacta
60
acgccatggc ggggaccgga gtgagaaacc ggtgtctgtc actgactgca aagtgagcga
120
gaagcaggct gcggggccgtc ccagcacgac gtggagcccc gcggagacct cgagatgccc
180
cgcggggaag ctcttgcccc cgggagacgg ggggctaagg acgaggccct gggcgaagaa
240
tcgggggagc ggtggagccc cgagttccat ctgcagagga aattggcgga cagcagccac
300
```

atacaggaaa aacataccta ttacctttct gaggtggct ttccagcaat tgtttcaaag
 1800
 gaaaatagat ccccttaaag aaaaaatata ggctttaggg aacaaagga caagcagaac
 1860
 aggtgtggaa gagagatttt caggaagga aaaatttata gctacagagg gtagttagaa
 1920
 aaatcataac ttatatgtga ataaaatata tataagcagc atttacggta gtggcattct
 1980
 acttattaag atgcaatgaa atgaagaaag gctttatgtt caaggacctt tgccatagtt
 2040
 cagctaattg tagttttata tagaaatgat cctgaacact ctgaacttga cgtagtcctg
 2100
 cggtgatatt ctatctgcag tatttgtacc tccagaatgg cagatccctc agcaggaaca
 2160
 aaggcatatt gacggttctc tcagcgtatg cattaaaaaa ggtacttctt gaaacttttg
 2220
 attcaataat gactaaacat actatgtaca caattactgt aaggctaatt cacgtgccat
 2280
 acgccacctg aaagcctgag ttatcttgct ataagctttt catggagcac ttcctttcca
 2340
 gaaactgatt tgtaactcat ttagagaatg tcctggcgtc ggttttttagc atatgtggta
 2400
 tttaaacaga gctagaatgt gatgtctgaa gataatgctg catttctggg tttcttgtgt
 2460
 ggattttaaa ataaattgtg cctacaaata taiaaaaaaa aiaiaaaaaa aiaiaaaaaa
 2520
 aaaa
 2524

<210> 5522

<211> 441

<212> PRT

<213> Homo sapiens

<400> 5522

Met	Val	His	Ile	Lys	Lys	Gly	Glu	Leu	Thr	Gln	Glu	Glu	Lys	Glu	Leu
1				5				10						15	
Leu	Glu	Val	Ile	Gly	Lys	Gly	Thr	Val	Gln	Glu	Ala	Gly	Thr	Leu	Leu
			20					25					30		
Ser	Ser	Lys	Asn	Val	Arg	Val	Asn	Cys	Leu	Asp	Glu	Asn	Gly	Met	Thr
		35					40					45			
Pro	Leu	Met	His	Ala	Ala	Tyr	Lys	Gly	Lys	Leu	Asp	Met	Cys	Lys	Leu
	50					55					60				
Leu	Leu	Arg	His	Gly	Ala	Asp	Val	Asn	Cys	His	Gln	His	Glu	His	Gly
65				70					75					80	
Tyr	Thr	Ala	Leu	Met	Phe	Ala	Ala	Leu	Ser	Gly	Asn	Lys	Asp	Ile	Thr
			85					90						95	
Trp	Val	Met	Leu	Glu	Ala	Gly	Ala	Glu	Thr	Asp	Val	Val	Asn	Ser	Val
			100					105					110		
Gly	Arg	Thr	Ala	Ala	Gln	Met	Ala	Ala	Phe	Val	Gly	Gln	His	Asp	Cys
		115				120						125			
Val	Thr	Ile	Ile	Asn	Asn	Phe	Phe	Pro	Arg	Glu	Arg	Leu	Asp	Tyr	Tyr
	130				135						140				
Thr	Lys	Pro	Gln	Gly	Leu	Asp	Lys	Glu	Pro	Lys	Leu	Pro	Pro	Lys	Leu

acagacgcat cgtttctttt ttaatactcc ctaagaaagg gaataacctt caagctggcg
180
ggagcaatgg ttcacataaa gaaaggcgag ctgacccagg aggagaagga gctactggaa
240
gtcatcgga aaggtactgt ccaagaagct ggaacattat tatccagcaa gaatgttcgt
300
gtcaactgtt tggacgagaa tggaatgact cctctaatagc atgcagcata taaaggaaaa
360
ctcgatatgt gcaaattact actgcgacat ggagccgatg taaattgtca tcagcatgaa
420
catggataca cagccctcat gtttgctgca ctttctggta ataaagacat cacatgggta
480
atggttagagg ctgggtgctga gacagatgtt gtcaactctg tgggaagaac agcagctcag
540
atggcagcct ttgtgggtca acatgattgt gtgaccataa tcaacaattt ctttcctcga
600
gagagactgg attattacac taagccccag ggactggata aagagccaaa actgccccca
660
aagttggcag gcccgctgca caaaattatc accacaacga atcttcatcc tgtcaagatc
720
gtgatgcttg taaatgagaa tcctctgctg acagaagaag cagccctgaa taaatgctac
780
agagtgatgg atttgatattg tgagaaatgt atgaagcaaa gagacatgaa tgaagtattg
840
gctatgaaga tgcattacat aagctgtatc tttcagaaat gcattaactt cttaaaagat
900
ggagagaata aactggacac cttgatcaaa agcttgctaa aaggccgagc ttctgatggc
960
tttccagtgt atcaagaaaa gatcattaga gaaagtatca gaaaatttcc atactgtgaa
1020
gccacactcc tacagcagct ggtgcgaagc atcgctccag ttgaaattgg ttctgatccc
1080
actgcattct ccgtccttac ccaagccatc actggccagg tgggttttgt ggatgtggaa
1140
ttttgacta cctgtggaga aaaggagca agtaaaagat gttcagtttg caaaatggta
1200
atatattgtg atcaaacctg ccagaaaaca cactggttta ctcataagaa aatctgtaag
1260
aatctgaagg acatttacga aaagcaacag ttggaggctg ccaaagaaaa gagacaagag
1320
gaaaaccacg gcaaacttga tgtcaattct aactgtgtta atgaagagca accagaggct
1380
gaagtaggta tctctcaaag ggattccaat cctgaagatt ccggggaagg aaagaaagaa
1440
tctcttgaaa gcgaagctga gttggaaggc ttacaggatg ctctgcagg gccacagggt
1500
tctgaggagt aaaagccaga gcaagtgccg gtgtggatgg tcctcacctt gcaagaagct
1560
ggaaaactcc taggaatgca ttgtctcac cttgttatac ctgctgggca ccatggcagg
1620
attccacatt tcatagaata caggttttca agcaaaccct tggtgaccat gccctaattt
1680
cctattgatt tctgttctat gattgaatgg atattcctat ggaaaatttt ttgtttcaaa
1740

85

<210> 5519
 <211> 401
 <212> DNA
 <213> Homo sapiens

<400> 5519
 ctccataaca tccattttcc tattatgagc agaggaaata aacatgcaga tggcttggtt
 60
 tccttcgcat aacttgtaga ggggtaggta gcataaaaga cagccggtct caagaagcaa
 120
 ccatgcgcct cactacttac catgttcctg cgggcattcc cctcccgaag ggagtctctg
 180
 aaaacaaaca cacacagaag ttggcgctgg gcaccacatt ctctcttga cctaaccatc
 240
 aggaatttgc tgtgccatct gttcataaaa cttagccagg cccagaaagc ttgtcccaac
 300
 cacatgctaa gagccaagca gatggaacag aagctcccc aagctgctgg ctcccactat
 360
 ggctgggatg aagcaagaac ctgggcccac acaggctgca a
 401

<210> 5520
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 5520
 Met Trp Leu Gly Gln Ala Phe Trp Ala Trp Leu Ser Phe Met Asn Arg
 1 5 10 15
 Trp His Ser Lys Phe Leu Met Val Arg Ser Arg Gly Glu Cys Gly Ala
 20 25 30
 Gln Arg Gln Leu Leu Cys Val Phe Val Phe Arg Asp Ser Leu Arg Glu
 35 40 45
 Gly Asn Ala Arg Arg Asn Met Val Ser Ser Glu Ala His Gly Cys Phe
 50 55 60
 Leu Arg Pro Ala Val Phe Tyr Ala Thr Tyr Pro Cys Thr Ser Tyr Ala
 65 70 75 80
 Lys Glu Thr Lys Pro Ser Ala Cys Leu Phe Pro Leu Leu Ile Ile Gly
 85 90 95
 Lys Trp Met Leu Trp
 100

<210> 5521
 <211> 2524
 <212> DNA
 <213> Homo sapiens

<400> 5521
 ngggggagct cgcccgtgt ccgccagccc gcgggagggga ggagagaagc gaagcgtttc
 60
 cgcggttggc tactcagtgt cttggtctca agttgcctca ttgcggctgg cgttcccaat
 120

115

120

<210> 5517
 <211> 804
 <212> DNA
 <213> Homo sapiens

<400> 5517
 nctgtatggc caaagcacia aggggaaggat cgcgaattta cattcttgga gctatcatct
 60
 gtactgtact gttgtgatct actgattggc attggcatag tagtagggc aagtgcaga
 120
 atccgtgccca gcagtctcca gggtcagaag caattcaaga ccctgatgat agctctccag
 180
 caaccaacac atgggtgacat ggtgattgtg ccaacttggt gctcagttat atgcagggcc
 240
 agtgattggg ttaagtgaag accatgggtg agatcatttg tctttgggtct aatagaattt
 300
 gagctagtag aatttgagtc tccagggaaa gagctacttg accaaattaa actagtagca
 360
 ggtagagcat gaatgacagc atattatacc atcaagatgt tcttagagca gtgtatggat
 420
 ggatcgattg tactgccatc agttgtgact gacgttgat tcaaggagaa agagaaactt
 480
 gtttagaaaag cactttgaaa gttttttgag tacgggggtg ccctgtatca ccccgttatg
 540
 gttgaacttt ctccttcaaa attaccagac ttggcagcag tggcaaatta ttgggctaaa
 600
 agacttaatc agacatattc tgggttcaag gtcctaata taatacctgg tgcaaacatt
 660
 atacttccac tcattcagat ggttgcaccc tgccaggcat ccagtgggac tgggaatatg
 720
 gacacttgaa cattaaacat cctgaagaat tttggaatga cagggttaca gtgaacataa
 780
 tcagttctct atattaataaa aaaa
 804

<210> 5518
 <211> 85
 <212> PRT
 <213> Homo sapiens

<400> 5518
 Xaa Val Trp Pro Lys His Lys Gly Lys Asp Pro Gln Phe Thr Phe Leu
 1 5 10 15
 Glu Leu Ser Ser Val Leu Tyr Cys Cys Asp Leu Leu Ile Gly Ile Gly
 20 25 30
 Ile Val Val Gly Ser Ser Asp Arg Ile Arg Ala Ser Ser Leu Gln Val
 35 40 45
 Gln Lys Gln Phe Lys Thr Leu Met Ile Ala Leu Gln Gln Pro Thr His
 50 55 60
 Gly Asp Met Val Ile Val Pro Thr Cys Cys Ser Val Ile Cys Arg Ala
 65 70 75 80
 Ser Asp Trp Phe Lys

```

          165              170              175
Pro Cys Val Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro
          180              185              190
Leu Pro Val Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp
          195              200              205
Ser Ser Leu Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu
          210              215              220
Ser Glu Gly Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp
225              230              235              240
Glu Ala Val Ser Leu Asp Asp Ala
          245

```

<210> 5515

<211> 420

<212> DNA

<213> Homo sapiens

<400> 5515

```

gtttgtacca acccctctc catccttgaa gcagtcattgg cccactgcaa gaaaatgcaa
60
gaaaggatgt ccgcacagct ggctgctgct gagagcagac aaaagaagct ggaaatggag
120
aagcttcagc tacaagccct tgagcaagag cacaagaagc tggctgcccg ccttgaggaa
180
gagcgtggca agaacaagca ggtggtcctg atgctgggtca aagagtgcaa gcagctctca
240
agcaaagtca tagaggaggc ccagaagctc gaagacgtaa tggccaaact ggcttcttct
300
ctttgtcacc agcacctgct tcatagtctc tctggagtgc caggaacggg tcatatagat
360
taaattctccc ataccgttcc tggataaata cctccttctc gcgagcccgc agggcctcga
420

```

<210> 5516

<211> 120

<212> PRT

<213> Homo sapiens

<400> 5516

```

Val Cys Thr Asn Pro Leu Ser Ile Leu Glu Ala Val Met Ala His Cys
1          5          10          15
Lys Lys Met Gln Glu Arg Met Ser Ala Gln Leu Ala Ala Ala Glu Ser
20          25          30
Arg Gln Lys Lys Leu Glu Met Glu Lys Leu Gln Leu Gln Ala Leu Glu
35          40          45
Gln Glu His Lys Lys Leu Ala Ala Arg Leu Glu Glu Glu Arg Gly Lys
50          55          60
Asn Lys Gln Val Val Leu Met Leu Val Lys Glu Cys Lys Gln Leu Ser
65          70          75          80
Ser Lys Val Ile Glu Glu Ala Gln Lys Leu Glu Asp Val Met Ala Lys
85          90          95
Leu Ala Ser Ser Leu Cys His Gln His Leu Leu His Ser Leu Ser Gly
100          105          110
Val Pro Gly Thr Gly His Ile Asp

```

aaggccacag ccgcggccct gggcagtttc ccggcaggtg gcccggccga gctgtcgctg
 120
 agactcgggg agccattgac catcgtctct gaggatggag actggtggac ggtgctgtct
 180
 gaagtctcag gcagagagta taacatcccc agcgtccacg tggccaaagt ctcccatggg
 240
 tggctgtatg agggcctgag caggagagaaa gcagaggacc tgctgttgtt acctgggaac
 300
 cctggagggg ccttcctcat ccgggagagc cagaccagga gaggtcttta ctctctgtca
 360
 gtccgectca gccgcctgac atcctgggac cggatcagac actacaggat ccaactgcctt
 420
 gacaatggct ggctgtacat ctcaccgcgc ctcaccttcc cctcactcca ggccttggtg
 480
 gaccattact ctgagctggc ggatgacatc tgctgcctac tcaaggagcc ctgtgtcctg
 540
 cagagggctg gcccgtccc tggcaaggat ataccctac ctgtgactgt gcagaggaca
 600
 ccaactcaact ggaaagagct ggacagctcc ctcctgtttt ctgaagctgc cacaggggag
 660
 gagtctcttc tcaagtgggg tctccgggag tccctcagct tctacatcag cctgaatgac
 720
 gaggtgtct ctttgatga tgcctaggcc caaaggagag gccaaaaggg aaaccaaggg
 780
 tgcacaccta gaacccaat tcagcctcct gggcaccca gaggcaaggc tgtgcac
 837

<210> 5514

<211> 248

<212> PRT

<213> Homo sapiens

<400> 5514

Xaa	Ser	Leu	Ser	Ser	Ser	Val	Gln	Gly	Gln	Gly	Pro	Val	Thr	Met	Glu
1				5					10					15	
Ala	Glu	Arg	Ser	Lys	Ala	Thr	Ala	Ala	Leu	Gly	Ser	Phe	Pro	Ala	
			20				25					30			
Gly	Gly	Pro	Ala	Glu	Leu	Ser	Leu	Arg	Leu	Gly	Glu	Pro	Leu	Thr	Ile
		35				40					45				
Val	Ser	Glu	Asp	Gly	Asp	Trp	Trp	Thr	Val	Leu	Ser	Glu	Val	Ser	Gly
	50				55					60					
Arg	Glu	Tyr	Asn	Ile	Pro	Ser	Val	His	Val	Ala	Lys	Val	Ser	His	Gly
65				70					75					80	
Trp	Leu	Tyr	Glu	Gly	Leu	Ser	Arg	Glu	Lys	Ala	Glu	Asp	Leu	Leu	Leu
			85					90					95		
Leu	Pro	Gly	Asn	Pro	Gly	Gly	Ala	Phe	Leu	Ile	Arg	Glu	Ser	Gln	Thr
		100					105					110			
Arg	Arg	Gly	Ser	Tyr	Ser	Leu	Ser	Val	Arg	Leu	Ser	Arg	Pro	Ala	Ser
		115				120					125				
Trp	Asp	Arg	Ile	Arg	His	Tyr	Arg	Ile	His	Cys	Leu	Asp	Asn	Gly	Trp
	130				135					140					
Leu	Tyr	Ile	Ser	Pro	Arg	Leu	Thr	Phe	Pro	Ser	Leu	Gln	Ala	Leu	Val
145				150					155					160	
Asp	His	Tyr	Ser	Glu	Leu	Ala	Asp	Asp	Ile	Cys	Cys	Leu	Leu	Lys	Glu

85 90 95
 His Ser Gly Glu Asn Leu Tyr Glu Cys
 100 105

<210> 5511
 <211> 379
 <212> DNA
 <213> Homo sapiens

<400> 5511
 tccggagtgt cacaggcctc agccacaagg ctttcctgat tgggctccac atctgcagaa
 60
 ccttccttgg gaaaagaggg catcgtctca atcgcatagt cacacacatc ccttaactca
 120
 ctctgctgag ttgctgagag tctgtgttcc tctctccact tataggatgg gtcctcatct
 180
 tcttgagctt caagcccca ggagagacc tggctgctcc tcatgggagc ctcagggata
 240
 atgctgaatt cctctatggc agagatggga ggagaggctc cacgctgggc ctcctcagcc
 300
 tccatcaggg ctgaatcctg gtcggtgtca catgctgctt cggccccagc gtcccctcca
 360
 ggtcccggcg ccggccgcn
 379

<210> 5512
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 5512
 Met Glu Ala Glu Glu Ala Gln Arg Gly Ala Ser Pro Pro Ile Ser Ala
 1 5 10 15
 Ile Glu Glu Phe Ser Ile Ile Pro Glu Ala Pro Met Arg Ser Ser Gln
 20 25 30
 Val Ser Ala Leu Gly Leu Glu Ala Gln Glu Asp Glu Asp Pro Ser Tyr
 35 40 45
 Lys Trp Arg Glu Glu His Arg Leu Ser Ala Thr Gln Gln Ser Glu Leu
 50 55 60
 Arg Asp Val Cys Asp Tyr Ala Ile Glu Thr Met Pro Ser Phe Pro Lys
 65 70 75 80
 Glu Gly Ser Ala Asp Val Glu Pro Asn Gln Glu Ser Leu Val Ala Glu
 85 90 95
 Ala Cys Asp Thr Pro
 100

<210> 5513
 <211> 837
 <212> DNA
 <213> Homo sapiens

<400> 5513
 nnaagcttga gttcctctgt ccaaggccag ggacctgtga ccatggaagc agagagaagc
 60

435 440 445

<210> 5509
 <211> 818
 <212> DNA
 <213> Homo sapiens

<400> 5509
 ccactgtgtg aagagaaatt agggtgaccc aggcagtaca tcctactccc tggacccacc
 60
 aaggagagct gtatttgtgt ttcattggtt ctttaccaaa taattctagc atcggaattg
 120
 ctatgtgaga ggaagtaagt atacacagcg taagaggtgt gataaccaag tcatagaaga
 180
 aatgttttga gaacatggaa tcatgtgaac ttattatgtg gtaagtacag ataccagggg
 240
 ctgtcagtct caccatcctt ttctacacat gtggatgctt caggactcca gcctttgagg
 300
 atgtggcttt caacttcacc ctacaggaaa ggtagtcaat gtggagaagc cttcagccag
 360
 attccaggtc ataactctgaa taagaaaacg cctcctggag taaagccacc tgaaagccat
 420
 gtgtgtggag aggtcggcgt gggctatcca tccactgaaa ggcacatcag agatcgctt
 480
 ggacgcaaac cctgtgaata tcaggaatgt agacagaagg catatacatg taagccatgt
 540
 gggaatgcct ttcgttttca ccactccttt cacatacacg aaaggcctca cagtggagaa
 600
 aacctctatg aatgttagga atttcagaaa acattcactt ccccccaaaa ccttcaaaga
 660
 tgtgaaaatg catagtggag atggacctta caaatgcaag gtgggtagga aaacctttga
 720
 ctctcccagt tcatttcgaa tacatggaag atctcattct ggagagaaac ccaatgtgtg
 780
 taggcactgt gggagcacct acaatcattt cagttttg
 818

<210> 5510
 <211> 105
 <212> PRT
 <213> Homo sapiens .

<400> 5510
 Met Trp Leu Ser Thr Ser Pro Tyr Arg Lys Gly Ser Gln Cys Gly Glu
 1 5 10 15
 Ala Phe Ser Gln Ile Pro Gly His Asn Leu Asn Lys Lys Thr Pro Pro
 20 25 30
 Gly Val Lys Pro Pro Glu Ser His Val Cys Gly Glu Val Gly Val Gly
 35 40 45
 Tyr Pro Ser Thr Glu Arg His Ile Arg Asp Arg Leu Gly Arg Lys Pro
 50 55 60
 Cys Glu Tyr Gln Glu Cys Arg Gln Lys Ala Tyr Thr Cys Lys Pro Cys
 65 70 75 80
 Gly Asn Ala Phe Arg Phe His His Ser Phe His Ile His Glu Arg Pro

1	5	10	15
Leu Asp Pro Tyr Thr Glu Leu Arg Lys Gln Pro Leu Arg Lys Tyr Val			
	20	25	30
Thr Pro Ser Asp Phe Asp Gln Leu Lys Gln Phe Leu Thr Phe Asp Lys			
	35	40	45
Gln Val Leu Arg Phe Tyr Ala Ile Trp Asp Asp Thr Asp Ser Met Tyr			
	50	55	60
Gly Glu Cys Arg Thr Tyr Ile Ile His Tyr Tyr Leu Met Asp Asp Thr			
65	70	75	80
Val Glu Ile Arg Glu Val His Glu Arg Asn Asp Gly Arg Asp Pro Phe			
	85	90	95
Pro Leu Leu Met Asn Arg Gln Arg Val Pro Lys Val Leu Val Glu Asn			
	100	105	110
Ala Lys Asn Phe Pro Gln Cys Val Leu Glu Ile Ser Asp Gln Glu Val			
	115	120	125
Leu Glu Trp Tyr Thr Ala Lys Asp Phe Ile Val Gly Lys Ser Leu Thr			
	130	135	140
Ile Leu Gly Arg Thr Phe Phe Ile Tyr Asp Cys Asp Pro Phe Thr Arg			
145	150	155	160
Arg Tyr Tyr Lys Glu Lys Phe Gly Ile Thr Asp Leu Pro Arg Ile Asp			
	165	170	175
Val Ser Lys Arg Glu Pro Pro Pro Val Lys Gln Glu Leu Pro Pro Tyr			
	180	185	190
Asn Gly Phe Gly Leu Val Glu Asp Ser Ala Gln Asn Cys Phe Ala Leu			
	195	200	205
Ile Pro Lys Ala Pro Lys Lys Asp Val Ile Lys Met Leu Val Asn Asp			
	210	215	220
Asn Lys Val Leu Arg Tyr Leu Ala Val Leu Glu Ser Pro Ile Pro Glu			
225	230	235	240
Asp Lys Asp Arg Arg Phe Val Phe Ser Tyr Phe Leu Ala Thr Asp Met			
	245	250	255
Ile Ser Ile Phe Glu Pro Pro Val Arg Asn Ser Gly Ile Ile Gly Gly			
	260	265	270
Lys Tyr Leu Gly Arg Thr Lys Val Val Lys Pro Tyr Ser Thr Val Asp			
	275	280	285
Asn Pro Val Tyr Tyr Gly Pro Ser Asp Phe Phe Ile Gly Ala Val Ile			
	290	295	300
Glu Val Phe Gly His Arg Phe Ile Ile Leu Asp Thr Asp Glu Tyr Val			
305	310	315	320
Leu Lys Tyr Met Glu Ser Asn Ala Ala Gln Tyr Ser Pro Glu Ala Leu			
	325	330	335
Ala Ser Ile Gln Asn His Val Arg Lys Arg Glu Ala Pro Ala Pro Glu			
	340	345	350
Ala Glu Ser Lys Gln Thr Glu Lys Asp Pro Gly Val Gln Glu Leu Glu			
	355	360	365
Ala Leu Ile Asp Thr Ile Gln Lys Gln Leu Lys Asp His Ser Cys Lys			
	370	375	380
Asp Asn Ile Arg Glu Ala Phe Gln Ile Tyr Asp Lys Glu Ala Ser Gly			
385	390	395	400
Tyr Val Asp Arg Asp Met Phe Phe Lys Ile Cys Glu Ser Leu Asn Val			
	405	410	415
Pro Val Asp Asp Ser Leu Val Lys Glu Leu Ile Arg Met Cys Ser His			
	420	425	430
Gly Glu Gly Lys Ile Asn Tyr Tyr Asn Phe Val Arg Ala Phe Ser Asn			

aaccgccagc gtgtgcccaa agttttggtg gaaaatgcaa agaacttccc tcagtgtgtg
360
ctagaaatct ctgaccaaga agtggtggaa tggatatactg ctaaagactt cattgttggg
420
aagtcaactca ctatccttgg gagaactttc ttcatttatg attgtgatcc atttactcga
480
cggattatac aagagaagtt tggaaactct gatttaccac gtattgatgt gagcaagcgg
540
gaaccacctc cagtataaaca ggagttgcct ccttataacg gttttggact agtgggaagat
600
tctgctcaga attgttttgc tctcattcca aaagctccaa aaaaagacgt tattaaaatg
660
ctggtgaatg ataacaaggt gcttcgttat ttggctgtac tggaaatcccc catcccagaa
720
gacaaagacc gcagatttgt cttctcttac tttctagcta ccgacatgat cagtatcttt
780
gagcctcctg ttcgcaattc tggatcattt gggggcaagt accttggcag gactaaagtt
840
gttaaacatc actctacagt ggacaaccct gtctactatg gccccagtga cttcttcatt
900
ggtgctgtga ttgaagtgtt tggtcaccgg ttcacatccc ttgatacaga cgagtatgtt
960
ttgaaatata tggagagcaa cgctgcccag tattcaccag aagcactcgc gtcaattcag
1020
aaccatgtcc gaaagcgaga agcgcctgct ccagaagcag aaagcaagca aactgaaaag
1080
gatccaggcg tgcaggaatt ggaagcatta atagacacaa ttcagaagca actgaaagat
1140
cactcatgca aagacaacat tcgtgaggca tttcaaattt atgacaagga agcttcagga
1200
tatgtggaca gagacatgtt ctttaaaatc tgtgaatcgc ttaacgtccc agtggatgac
1260
tccttgggta aggagttaat caggatgtgc tctcatggag aaggcaaaat taactactat
1320
aactttgttc gtgctttctc aaactgacct gctgatgaga aaatgcaaga caatttttga
1380
tactggaact atgctttgaa atacacctta cactcttcat agaggcattt acagggttcc
1440
tgaagtttta tttctgtttt ggttcttatt tcactcctac tgaagtcgaa actaaattgg
1500
atctaatagg atctaagatt ggtgccttat ttaggggtgat aggggtatag caatgtctaa
1560
ttttgtgtgt caaattgact tggccacagg gggcccaaatt atttcctttc tttcttttta
1620
aaaaataaaa ttttttttga gatgggaaaa aaaaaaaaa
1658

<210> 5508

<211> 448

<212> PRT

<213> Homo sapiens

<400> 5508

Xaa Leu Glu Ser Gln Gly Ile Glu Leu Asn Pro Pro Glu Lys Met Ala

<400> 5506

Lys Leu Gly Arg Pro Ser Gly Ser Cys Arg Gly Gly Arg Ala Gln Leu
 1 5 10 15
 Gln Glu Gly Val Gln Lys Pro Gln Ala Met Ala Val Gly Asn Ile Asn
 20 25 30
 Glu Leu Pro Glu Asn Ile Leu Leu Glu Leu Phe Thr His Val Pro Ala
 35 40 45
 Arg Gln Leu Leu Leu Asn Cys Arg Leu Val Cys Ser Leu Trp Arg Asp
 50 55 60
 Leu Ile Asp Leu Val Thr Leu Trp Lys Arg Lys Cys Leu Arg Glu Gly
 65 70 75 80
 Phe Ile Thr Glu Asp Trp Asp Gln Pro Val Ala Asp Trp Lys Ile Phe
 85 90 95
 Tyr Phe Leu Arg Ser Leu His Arg Asn Leu Leu His Asn Pro Cys Ala
 100 105 110
 Glu Glu Gly Phe Glu Phe Trp Ser Leu Asp Val Asn Gly Gly Asp Glu
 115 120 125
 Trp Lys Val Glu Asp Leu Ser Arg Asp Gln Arg Lys Glu Phe Pro Asn
 130 135 140
 Asp Gln Val Lys Lys Tyr Phe Val Thr Ser Tyr Tyr Thr Cys Leu Lys
 145 150 155 160
 Ser Gln Val Val Asp Leu Lys Ala Glu Gly Tyr Trp Glu Glu Leu Leu
 165 170 175
 Asp Thr Phe Arg Pro Asp Ile Val Val Lys Asp Trp Phe Ala Ala Arg
 180 185 190
 Ala Asp Cys Gly Cys Thr Tyr Gln Leu Lys Val Gln Leu Leu Ser Ala
 195 200 205
 Asp Tyr Phe Val Leu Ala Ser Phe Glu Pro Asp Pro Ala Thr Ile Gln
 210 215 220
 Gln Lys Ser Asp Ala Lys Trp Arg Glu Val Ser His Thr Phe Ser Asn
 225 230 235 240
 Tyr Pro Pro Gly Val Arg Tyr Ile Trp Phe Gln His Gly Gly Val Asp
 245 250 255
 Thr His Tyr Trp Ala Gly Trp Tyr Gly Pro Arg Val Thr Asn Ser Ser
 260 265 270
 Ile Thr Ile Gly Pro Pro Leu Pro
 275 280

<210> 5507

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 5507

nttttagaaa gccaaaggaat tgagttaaatt ccaccagaga agatggctct tgatccttac
 60
 actgaactcc gaaaacagcc tcttcgtaag tatgtcacc catcagactt tgatcaactc
 120
 aagcaatttc tcacctttga caaacaggtc cttcgattct atgcaatctg ggatgataca
 180
 gacagcatgt atggtgaatg tcggacctac atcattcatt actatcttat ggatgatacg
 240
 gtggaaattc gagaggcca cgaacggaat gatgggagag atcctttccc actcctaattg
 300

370 375 380
Pro Cys Gly Ser Trp Gly Thr Arg
385 390

<210> 5505
<211> 1099
<212> DNA
<213> Homo sapiens

<400> 5505
aagcttgggc ggcccagcgg atcgtgccgc ggccggccgag cgcagctaca ggaggggtgtc
60
cagaagccac aagccatggc tgtggggaac atcaacgagc tgcccagaaa catcctgctg
120
gagctgttca cgcacgtgcc cgcccgccag ctgctgctga actgccgcct ggtctgcagc
180
ctctggcggg acctcatcga cctcgtgacc ctctggaaac gcaagtgcct gcgagagggc
240
ttcatcactg aggactggga ccagcccgtg gccgactgga agatcttcta cttcttacgg
300
agcctgcaca ggaacctcct gcacaacccg tgcgctgaag aggggttcga gttctggagc
360
ctggatgtga atggaggcga tgagtggaag gtggaggatc tctctcgaga ccagaggaag
420
gaattcccca atgaccaggt caagaaatac ttcgttactt catattacac ctgcctcaag
480
tcccaggtgg tggacctcaa ggccgaaggg tattgggagg agctactaga cacattccgg
540
ccggacatcg tggttaagga ctggtttgct gccagagccg actgtggctg cacctaccaa
600
ctcaaagtgc agctcctgtc ggctgactac ttcgtgttg cctccttcga gccagaccg
660
gcgaccatcc agcagaagag cgatgccaag tggagggagg tctccacac attctccaac
720
taccgccccg gcgtccgcta catctggttt cagcacggcg gcgtggacac tcattactgg
780
gccggctggc acggcccag ggtcaccaac agcagcatca ccatcgggccc ccgctgccc
840
tgacaccccc tgagcccca tctgctgaac cctgactggc aaacaactgc tgtcagaaaa
900
gggctgggct tgggaagggg aggtggaggc cagggtgtccc cagacctcta acccttgccc
960
ctagcagcct cttctttgtg gagcctctca gtgtgggcag ccctcgcag ctggggctcg
1020
gccagctctc cccgaaaggc cttgacctga atgatggccg gggaagcctg cgtgtgcccc
1080
tttcagagac ggagcacct
1099

<210> 5506
<211> 280
<212> PRT
<213> Homo sapiens

<210> 5504
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 5504
 Gln Lys Ala Gly Glu Lys Pro Leu Ala Ala Gly Pro Gly Glu Glu Glu
 1 5 10 15
 Leu Leu Arg Gly Ser Ala Pro His Ala Gln Asp Thr Gln Ser Glu Glu
 20 25 30
 Leu Pro Pro Ser Cys Thr Ile Ser Gly Glu Lys Lys Pro Pro Ala Val
 35 40 45
 Ser Gly Glu Ala Thr Gly Ala Asp Ala Gly Arg Leu Cys Pro Pro Pro
 50 55 60
 Arg Ser Arg Ala Pro His Lys Asp Arg Thr Leu Ala Arg Ser Arg Pro
 65 70 75 80
 Gln Thr Gln Gly Glu Asp Cys Ser Leu Pro Val Gly Glu Val Lys Ile
 85 90 95
 Gly Lys Arg Ser Tyr Ser Pro Ala Pro Gly Lys Gln Lys Lys Pro Asn
 100 105 110
 Ala Met Gly Leu Ala Pro Thr Ser Ser Pro Gly Ala Pro Asn Ser Ala
 115 120 125
 Arg Ala Thr His Asn Pro Val Pro Cys Gly Ser Gly Arg Gly Pro Cys
 130 135 140
 His Leu Ala Asn Leu Leu Ser Thr Leu Ala Gln Ser Asn Gln Asn Arg
 145 150 155 160
 Asp His Lys Gln Gly Pro Pro Glu Val Thr Cys Gln Ile Arg Lys Lys
 165 170 175
 Thr Arg Thr Leu Tyr Arg Ser Asp Gln Leu Glu Glu Leu Glu Lys Ile
 180 185 190
 Phe Gln Glu Asp His Tyr Pro Asp Ser Asp Lys Arg Arg Glu Ile Ala
 195 200 205
 Gln Thr Val Gly Val Thr Pro Gln Arg Ile Met Val Lys Gly Ala Gly
 210 215 220
 Ser Leu Val Ala Gly Trp Ser Gly Gly Gly Pro Thr Ile Glu Thr Leu
 225 230 235 240
 Glu Leu Gln Ser Glu Arg Ser Ala Val Ala Trp Val Trp Phe Gln Asn
 245 250 255
 Arg Arg Ala Lys Trp Arg Lys Met Glu Lys Leu Asn Gly Lys Glu Ser
 260 265 270
 Lys Asp Asn Pro Ala Ala Pro Gly Pro Ala Ser Ser Gln Cys Ser Ser
 275 280 285
 Ala Ala Glu Ile Leu Pro Ala Val Pro Met Glu Pro Lys Pro Asp Pro
 290 295 300
 Phe Pro Gln Glu Ser Pro Leu Asp Thr Phe Pro Glu Pro Pro Met Leu
 305 310 315 320
 Leu Thr Ser Asp Gln Thr Leu Ala Pro Thr Gln Pro Ser Glu Gly Ala
 325 330 335
 Gln Arg Val Val Thr Pro Pro Leu Phe Ser Pro Pro Pro Val Arg Arg
 340 345 350
 Ala Asp Leu Pro Phe Pro Leu Gly Pro Val His Thr Pro Gln Leu Met
 355 360 365
 Pro Leu Leu Met Asp Val Ala Gly Ser Asp Ser Ser His Lys Asp Gly

taacgccgtc tcagaattgc ataaatttgt ctacattttt caaagaagtt gggttatctg
120
atttaatcct cacaatagtc aagctaggaa ggtaagtgtg gaattattac cccatttgat
180
aggtagacaa attaaagctt aagatcaaac cgtttgcaaa gcaggaagca gcacttcctc
240
ttggtccagt tcttccttct ccttgggtgct aagggtcagt gatgttggtt cccacagggc
300
cagaaagctg gagagaagcc cctgggtgca ggacccgggg aggaggaact gctccggggc
360
tcagccctc atgctcagga cactcagagt gaggaactgc caccctcctg caccatctca
420
ggagagaaga agccgccagc agtctctgga gaagccaccg gggctgatgc tgggagactg
480
tgcccgcccc cccgtccag ggctccccac aaagacagaa ctctagcccg ctccaggccc
540
cagactcagg gggaagattg ttccctccca gtgggagagg tgaagatagg aaagaggtcc
600
tattctccag ccccggggaa gcagaaaaag cctaattgcca tgggtctggc cccaacatca
660
tctccgggtg cccctaactc agcccggtgc acacacaacc cagtgccttg tgggtcaggg
720
cgggggccct gccacctggc caatctcctc agtacattgg cgagagcaa ccaaaacaga
780
gaccacaagc aggggcccc ggaagtgacc tgccaaatta ggaaaaagac acgaacccta
840
taccgtcag atcagctgga ggagctagag aagatattcc aagaagacca ctatcctgac
900
agtgataaac gccgagagat tgcccagacg gtgggggtga cccccagcg catcatggta
960
aagggggccg gctcactggt ggcaggggtg agtggcggag ggcccacat tgaaacactc
1020
gaattgcaga gtgagcgctc agcggtagcc tgggtgtggt tccagaatcg ccgggccaag
1080
tggcgaaaaa tggagaaact gaatgggaaa gaaagcaagg acaatcctgc agccctggc
1140
cctgccagca gtcaatgcag ctctgcagct gagatcctac ctgctgtgcc catggagcca
1200
aagcctgacc ctttcctca ggagtcccct ctggatacct ttccagagcc cccatgctg
1260
ctgacttctg accagacttt ggccccacc caaccagtg aggggtgctca gagggtggtg
1320
acccccccac tcttcagccc cccacctgtg cgaagggccg atcttccttt ccccttggc
1380
cctgtccaca cccccaaact gatgccactg ctgatggatg ttgctggcag tgacagcagc
1440
cacaaggacg gccctgtgg gtcttggggg acaaggtaag gaacctacgg gggtaggtca
1500
ctctagtatt ctgggtgggg gtaggggggt gtagatggag agaagataga cacagagagg
1560
agagggttaa ctgagaggag cacagagtgg tacaggagat ggggatgaaa gggataaggg
1620
gatctgggga atgacctagg ggatcacagc aatagagcag aaacaagggt aagatgcta
1679

<212> DNA

<213> Homo sapiens

<400> 5501

attcggcacg aggtgagtcg gtggcaggaa cgtgggctct agactgtgca ttcaggctct
 60
 cctacttggc agaatgatct tggggaaacg acttcatctg aacttcagat atttcacatg
 120
 tgaagcgggg acaaaacat gcagctcaga ggtccctgtg ggggctgggg gagctgccct
 180
 gcaggtcttg gcacatgcac agcaggctcc ccatagcttt gtcaccacaa agggcactgt
 240
 tctattcaca gcacctctg cttctgctg gcaactgtgt ctccctgtgc tatatttaat
 300
 tccaccagca aagctggcga ggcaggggcc agccctgaag gagatctcct tgcctgaccc
 360
 ctggacctgg aaatggaggc ttcattgtgc cgccttggcg gcttaagcct gctgctttgg
 420
 cagtgccatg ggtgagccga gcagctgtga ggtgggtggg gcagggtgt agcccacgcc
 480
 ggggtctatt ccaggctcta ggggctggtg ctcacccca cccccagcga cttccgtcct
 540
 acctggcatg ctgcagccct ctgccggc
 568

<210> 5502

<211> 110

<212> PRT

<213> Homo sapiens

<400> 5502

Met	Ile	Leu	Gly	Lys	Arg	Leu	His	Leu	Asn	Phe	Arg	Tyr	Phe	Thr	Cys
1				5					10					15	
Glu	Ala	Gly	Thr	Lys	Pro	Cys	Ser	Ser	Glu	Val	Pro	Val	Gly	Ala	Gly
			20					25					30		
Gly	Ala	Ala	Leu	Gln	Val	Leu	Ala	His	Ala	Gln	Gln	Ala	Pro	His	Ser
			35					40				45			
Phe	Val	Thr	Thr	Lys	Gly	Thr	Val	Leu	Phe	Thr	Ala	Pro	Pro	Ala	Ser
			50			55					60				
Ala	Trp	Gln	Leu	Cys	Leu	Pro	Val	Leu	Tyr	Leu	Ile	Pro	Pro	Ala	Lys
65				70					75					80	
Leu	Ala	Arg	Gln	Gly	Pro	Ala	Leu	Lys	Glu	Ile	Ser	Leu	Pro	Asp	Pro
			85					90						95	
Trp	Thr	Trp	Lys	Trp	Arg	Leu	His	Val	Pro	Ala	Leu	Ala	Ala		
			100					105					110		

<210> 5503

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 5503

tgtctgggaa aagggaactc acaaggggtg agtaccacca aattaggaga taccatgagc
 60

20 25 30
 Leu Arg Phe Asn Glu Thr Thr Leu Cys Lys Pro Leu Val Pro Arg Glu
 35 40 45
 His Gln Phe Tyr Glu Thr Leu Pro Ala Glu Met Arg Lys Phe Thr Pro
 50 55 60
 Gln Tyr Lys Gly Val Val Ser Val Arg Phe Glu Glu Asp Glu Asp Arg
 65 70 75 80
 Asn Leu Cys Leu Ile Ala Tyr Pro Leu Lys Gly Asp His Gly Ile Val
 85 90 95
 Asp Ile Ala His Asn Ser Asp Cys Glu Pro Lys Ser Lys Leu Leu Arg
 100 105 110
 Trp Thr Thr Asn Lys Lys His His Val Leu Glu Thr Glu Lys Thr Pro
 115 120 125
 Lys Asp Trp Val Arg Gln His Arg Lys Glu Glu Lys Met Lys Ser His
 130 135 140
 Lys Leu Glu Glu Glu Phe Glu Trp Leu Lys Lys Ser Glu Val Leu Tyr
 145 150 155 160
 Tyr Thr Val Glu Lys Lys Gly Asn Ile Ser Ser Gln Leu Lys His Tyr
 165 170 175
 Asn Pro Trp Ser Met Lys Cys His Gln Gln Gln Leu Gln Arg Met Lys
 180 185 190
 Glu Asn Ala Lys His Arg Asn Gln Tyr Lys Phe Ile Leu Leu Glu Asn
 195 200 205
 Leu Thr Ser Arg Tyr Glu Val Pro Cys Val Leu Asp Leu Lys Met Gly
 210 215 220
 Thr Arg Gln His Gly Asp Asp Ala Ser Glu Glu Lys Ala Ala Asn Gln
 225 230 235 240
 Ile Arg Lys Cys Gln Gln Ser Thr Ser Ala Val Ile Gly Val Xaa Val
 245 250 255
 Cys Gly Met Gln Val Tyr Gln Ala Gly Ser Gly Gln Leu Met Phe Met
 260 265 270
 Asn Lys Tyr His Gly Arg Lys Leu Ser Val Gln Gly Phe Lys Glu Ala
 275 280 285
 Leu Phe Gln Phe Phe His Asn Gly Arg Tyr Leu Arg Arg Glu Leu Leu
 290 295 300
 Gly Pro Val Leu Lys Lys Leu Thr Glu Leu Lys Ala Val Leu Glu Arg
 305 310 315 320
 Gln Glu Ser Tyr Arg Phe Tyr Ser Ser Ser Leu Leu Val Ile Tyr Asp
 325 330 335
 Gly Lys Glu Arg Pro Glu Val Val Leu Asp Ser Asp Ala Glu Asp Leu
 340 345 350
 Glu Asp Leu Ser Glu Glu Ser Ala Asp Glu Ser Ala Gly Ala Tyr Ala
 355 360 365
 Tyr Lys Pro Ile Gly Ala Ser Ser Val Asp Val Arg Met Ile Asp Phe
 370 375 380
 Ala His Thr Thr Cys Arg Leu Tyr Gly Glu Asp Thr Val Val His Glu
 385 390 395 400
 Gly Gln Asp Ala Gly Tyr Ile Phe Gly Leu Gln Ser Leu Ile Asp Ile
 405 410 415
 Val Thr Glu Ile Ser Glu Glu Ser Gly Glu
 420 425

<210> 5501

<211> 568

ggggaccatg gaattgtgga cattgcacat aattcagact gtgaaccaa aagtaagctc
 660
 ctaagggtgga caacaaacaa aaaacatcat gtcttagaaa cagaaaagac ccctaaggac
 720
 tgggtgcgtc agcaccgtaa agaggagaaa atgaagagcc ataagttaga agaagaattt
 780
 gagtggctaa agaaatctga agtcttgtag tacactgtag agaagaaggg gaatataagt
 840
 tcccagctta aacactataa cccttgagc atgaaatgtc accagcaaca gttacagaga
 900
 atgaaggaga atgcaaagca tcggaaccag tacaaattta tcttactgga aaacctgact
 960
 tcccgtatg aggtgccttg tgccttgac ctcaagatgg gcacacgaca acatggtgat
 1020
 gatgcttcag aggagaaggc agccaaccag atccgaaaat gtcagcagag cacatctgca
 1080
 gtcattggtg tgnctgtgtg tggcatgcag gtgtaccaag caggcagtgg gcagctcatg
 1140
 ttcattgaaca agtaccatgg acggaagcta tcggtgcagg gcttcaagga ggcacttttc
 1200
 cagttcttcc acaatgggag gtacctgcgc cgtgaactcc tgggacctgt gctcaagaag
 1260
 ctgactgagc tcaaggcagt gttggagcga caggagtct accgcttcta ctcaagctcc
 1320
 ctgctggtca tttatgatgg caaggagcgg cccgaagtgg tcctggactc agatgctgag
 1380
 gatttgaggg acctgtcaga ggaatcagct gatgagtctg ctggtgccta tgcctacaaa
 1440
 cccatcggcg ccagctctgt agatgtgcgc atgatcgact ttgcacacac cacctgcagg
 1500
 ctgtatggcg aggacaccgt ggtgcatgag ggccaggatg ctggctatat cttcgggctc
 1560
 cagagcctga tagacattgt cacagagata agtgaggaga gtggggagtg agcttgctag
 1620
 ctgtccagt acttgagagc gactctgtgt cccaggcaca gctgtgctgc gtcagggagg
 1680
 aagccagtat ggccagggtg tggtctctgc agcctggagc tgatgtgcag tggcctctgt
 1740
 gagccccage ctgagccagt cccagctgtg cttggagtct ttattttatt taactatttc
 1800
 ttcaacattc cacatttgat gatgatacct ctttcttccc tgagtgtata tgttctaata
 1860
 caaatctttt tgttttattgt aaaaaaaaaa aaaaaaaaaa aaagaaaaac tcgaaaag
 1918

<210> 5500

<211> 426

<212> PRT

<213> Homo sapiens

<400> 5500

Met Ser Pro Ala Phe Arg Ala Met Asp Val Glu Pro Arg Ala Lys Gly
 1 5 10 15
 Val Leu Leu Glu Pro Phe Val His Gln Val Gly Gly His Ser Cys Val

<210> 5498
 <211> 150
 <212> PRT
 <213> Homo sapiens

<400> 5498
 Met Gly Gln Gly Ser Glu Ala Ala His Thr Pro Leu Lys Asn Glu Phe
 1 5 10 15
 His Pro Pro Ala Phe Ala Pro Arg Thr Leu Arg Met Ala Gln Leu Val
 20 25 30
 Ala Gln Leu Trp Trp Ser Ser Pro Phe Ile His Ser Pro Gly Glu Thr
 35 40 45
 Asn Ile Pro His Thr Leu Thr Glu Pro His Ser Val Pro Gly Trp Cys
 50 55 60
 Trp Asp Thr Leu Arg Arg His Gly Ala Gly Gln Gly His Pro Gly Met
 65 70 75 80
 Ala Arg Ser Gly Thr Gly Glu Gly Gln Arg Glu Gly Asp Ile Glu Arg
 85 90 95
 Glu Glu Asp Glu Glu Glu Gly Asn Arg Ser Arg Lys Ser Arg Asp Ser
 100 105 110
 Arg Ser Gln Val Lys Gly Leu Pro Leu His Ser Arg Glu Gln Arg Asp
 115 120 125
 Pro Ser Ala Gly Ala Ser Glu Lys Ser Arg Asn Pro Ser Arg Met Gly
 130 135 140
 Thr Trp Gly Val Asn Phe
 145 150

<210> 5499
 <211> 1918
 <212> DNA
 <213> Homo sapiens

<400> 5499
 ngctagccct gtatctgtct gagcagtggga atgtgccagg aaagaaggag caaccactga
 60
 ctgatgaacc ttgccagtc tcccttccaa gagggatgcc agagccttct gtctttgggc
 120
 tgcctctgcc cttcgtagat tctctgctgg gcctttggaa ctaacacagc aacttcagg
 180
 gtctcatgtt gaagacttta tggagcatcc tggccagaac aagccaagga gccaagacga
 240
 gagggacaca cggacaaaca acagacagaa gacgtactgg ccgctggact ccgctgcctc
 300
 ccccatctcc ccgccatctg cgcccgagg atgagcccag ccttcagggc catggatgtg
 360
 gagccccgcg ccaaaggcgt ccttctggag ccctttgtcc accaggtcgg ggggcactca
 420
 tgcgtgtctc gcttcaatga gacaaccctg tgcaagcccc tgggtcccaag ggaacatcag
 480
 ttctacgaga ccttcctgc tgagatgcgc aaattcactc ccaggtacaa aggtgtggta
 540
 tctgtgcgct ttgaagaaga tgaagacagg aacttgtgtc taatagcata tccattgaaa
 600

	260		265		270										
Phe	His	Met	Ala	Cys	Pro	Thr	Phe	Arg	Val	Ser	Ile	Ala	Arg	Leu	Glu
	275		280		285										
Met	Gly	Pro	Asp	Glu	Tyr	Glu	Glu	Met	Glu	Glu	Glu	Glu	Glu	Glu	Glu
	290		295		300										
Glu	Glu	Glu	Asp	Glu	Asp	Asp	Asp	Ser	Ala	Asp	Met	Asp	Glu	Ser	Asp
305			310		315									320	
Glu	Asp	Asp	Glu	Glu	Glu	Arg	Arg	Arg	Arg	Val	Phe	Asp	Val	Pro	Ile
			325		330									335	
Arg	Arg	Arg	Arg	Cys	Ser	Arg	Leu	Phe							
	340		345												

<210> 5497

<211> 1056

<212> DNA

<213> Homo sapiens

<400> 5497

caccaggaag aatgtggaag gatctcccat tggccgggtg gggcaaaagc ctgaggcaat
 60
 ctttcatccc cttttgccaa ggcgagactt tcccagtgac ggtgatgtag ttggccactc
 120
 tgactatggg tggactcggg tgtagacctc tgaagctgag atcacacgaa aacctggcct
 180
 ccccgccatg tagctgttgg agagtagaaa aatagagcac gcctgatgtt tctaaatgag
 240
 aagactttca atagtaatga agaattccatg gcactctcct caccctcaaa cacatggcag
 300
 tcattcacat acaggcccca aagtcactgt tagtgctgca gtggctcctg tggacattgg
 360
 aaagcccgga gagggcgtgg aagaaatcag ctggcccccg gcaggttctc tggggttttg
 420
 tgcccaaggc tcttgagacc ctaaaaactt tcaaaagtta actccccacg tccccatcct
 480
 gcttggtttt ctggactttt ctgaggcacc ggcagagggg tctcgttgct cccttgagtg
 540
 taggggcagc cctttaacct ggctccttga gtccctgctt tttctgcttc tgttgccctc
 600
 ttctctgtct tctctctctc caatatctcc ctctctttgt cctccccag ttctgacct
 660
 ggccatcccc ggggtgccct gaccagcccc gtgtctctc aggggtgtccc agcaccagcc
 720
 tggcacagag tggggctcag ttagagtatg tgggatgttg gtttcgccag gtgagtgaat
 780
 gaaaggactc gaccaccaca gctgagccac tagctgggccc atgcgaagag ttctaggtgc
 840
 aaaggctgga ggggtggaatt catttttgag aggtgtgtga gcagcttccg acccctgccc
 900
 catttgaacg ggggccttgc tggtcgcgtc cctgcattca cccgcgcggc catcccgtea
 960
 tccaacagtt gatcctaact gagcacgccc acggccctgg tctggcctgg gcaccggcga
 1020
 ccgtagccca tcccttgatg gcctctgtgt ccccag
 1056

gaattttaatt tcaggtcttc aacatgatga ccttggattt aatttaaagt cttcaacact
 2100
 atgcgcttta tcatattatt cacagatgca tttttgaaat gtagtatgta aaagtatgta
 2160
 acgtgctggtt tattaacaaa agattgttca caacatctca tgtagtttaa atttgtaa
 2220
 actgcttctg ttttgcttct cctttataca cttgactgtc tttgtgataa gtgacatgaa
 2280
 ttttatgtta ggattaagta tggtttcctg aaacttggat ttttttgta attatataat
 2340
 tgagagttaa gaatgaaatc cttcaagtgt taaaaactca cattttaaaa gcaaattttg
 2400
 gttccaaaaa aaaa
 2414

<210> 5496

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5496

Met	Leu	Trp	Lys	Arg	Arg	Leu	Gly	Cys	Lys	Phe	Pro	Gly	Arg	Leu	Ser
1				5					10					15	
Met	Phe	Ile	Pro	Asn	Ser	Gln	Trp	Thr	Glu	Val	Ser	Trp	Phe	Leu	Gly
			20					25					30		
Leu	Leu	Gly	Ser	Met	Ala	Leu	Ser	Asn	His	Tyr	Arg	Ser	Glu	Asp	Leu
	35						40					45			
Leu	Asp	Val	Asp	Thr	Ala	Ala	Gly	Gly	Phe	Gln	Gln	Arg	Gln	Gly	Leu
	50				55					60					
Lys	Tyr	Cys	Leu	Pro	Leu	Thr	Phe	Cys	Ile	His	Thr	Gly	Leu	Ser	Gln
65					70				75					80	
Tyr	Ile	Ala	Val	Glu	Ala	Ala	Glu	Gly	Arg	Asn	Lys	Asn	Glu	Val	Phe
			85					90					95		
Tyr	Gln	Cys	Pro	Asp	Gln	Met	Ala	Arg	Asn	Pro	Ala	Ala	Ile	Asp	Met
			100					105					110		
Phe	Ile	Ile	Gly	Ala	Thr	Phe	Thr	Asp	Trp	Phe	Thr	Ser	Tyr	Val	Lys
	115						120					125			
Asn	Val	Val	Ser	Gly	Gly	Phe	Pro	Ile	Ile	Arg	Asp	Gln	Ile	Phe	Arg
	130					135					140				
Tyr	Val	His	Asp	Pro	Glu	Cys	Val	Ala	Thr	Thr	Gly	Asp	Ile	Thr	Val
145					150					155				160	
Ser	Val	Ser	Thr	Ser	Phe	Leu	Pro	Glu	Leu	Ser	Ser	Val	His	Pro	Pro
			165					170					175		
His	Tyr	Phe	Phe	Thr	Tyr	Arg	Ile	Arg	Ile	Glu	Met	Ser	Lys	Asp	Ala
			180					185					190		
Leu	Pro	Glu	Lys	Ala	Cys	Gln	Leu	Asp	Ser	Arg	Tyr	Trp	Arg	Ile	Thr
	195					200						205			
Asn	Ala	Lys	Gly	Asp	Val	Glu	Glu	Val	Gln	Gly	Pro	Gly	Val	Val	Gly
	210					215					220				
Glu	Phe	Pro	Ile	Ile	Ser	Pro	Gly	Arg	Val	Tyr	Glu	Tyr	Thr	Ser	Cys
225					230					235				240	
Thr	Thr	Phe	Ser	Thr	Thr	Ser	Gly	Tyr	Met	Glu	Gly	Tyr	Tyr	Thr	Phe
			245					250					255		
His	Phe	Leu	Tyr	Phe	Lys	Asp	Lys	Ile	Phe	Asn	Val	Ala	Ile	Pro	Arg

agattgggct gcaagtttcc tggacgatta tcgatgttca taccgaattc acaatggaca
480
gaagttagtt ggttcctggg gttattggga agcatggcac tgtctaatca ctatcgttct
540
gaagatttgt tagacgtcga tacagctgcc ggaggattcc agcagagaca gggactgaaa
600
tactgtctcc ctttaacttt ttgcatacat actggtttga gtcagtacat agcagtggaa
660
gctgcagagg gccgaaacaa aaatgaagtt ttctaccaat gtccagacca aatggctcga
720
aatccagctg ctattgacat gtttattata ggtgctactt ttactgactg gtttacctct
780
tatgtcaaaa atgttgatc aggtggcttc cccatcatca gagaccaaatt ttcagatat
840
gttcacgac cagaatgtgt agcaacaact ggggatatta ctgtgtcagt ttccacatcg
900
tttctgccag aacttagctc tgtacatcca cccactatt tcttcacata ccgaatcagg
960
attgaaatgt caaaagatgc acttcctgag aaggcctgtc agttggacag tcgctattgg
1020
agaataacaa atgctaaggg tgacgtggaa gaagttcaag gacctggagt agttggtgaa
1080
tttccaatca tcagcccagg tcgggtatat gaatacacia gctgtaccac attctctaca
1140
acatcaggat acatggaagg gtattatacc ttccattttc tttactttta agacaagac
1200
tttaatgttg ccattccccg attccatag gcattgtcaa cattcagggt gtctatagcc
1260
cgattggaaa tgggtcctga tgaatatgaa gagatggaag aagaggagga ggaggaagag
1320
gaggaagacg aggatgatga ttcagcagat atggatgaat cagatgaaga tgatgaagag
1380
gagagacgga ggagagtctt tgatgttccc attcgcagac gccgctgctc acgccttttt
1440
tagcaagcct tctgtgatg gaagcactag gatgattcta ggctgttaaa tagatttctc
1500
aataatgtaa ataactaaat tgttctctgc atatagcagg aaaactagca tgaaatattg
1560
tttcaggccc tgggttctat gtgacactac attaggaatt ggaattgtttg ggtttgcttt
1620
gtgtttttga ggtagaggaa gaaatgggaa tctttttttt ctcttcagg agtcagtggg
1680
agaatagtcc tctagctaag gaacggacat acctttgttt taaaatattt tatacttaca
1740
aaaatctaga aatggagagg gaactgtttt gaataaggat taaaatacc tgcacaagga
1800
tagagagaaa ctatgtgact cattctgtga aaagacttct tgcagttgtg agttatttag
1860
aaatgatcaa aatttgtaat taggctaacc catttagtga ttcctaatat tttgtactca
1920
cagagaacta attgactaaa caacttgaac gctagtgggt tgcctttaga caatctgtct
1980
ttgaatttaa agtctttatc gctaagacct tgactttaaa tttttcatca ctacaacct
2040

1010 1015 1020
 Ile Leu Leu Gly His Gly Thr Arg Val Gly Ala Thr Tyr Phe Met Thr
 1025 1030 1035 1040
 Tyr His Thr Val Leu Gln Thr Ser Ala Asp Phe Ile Asp Ala Leu Lys
 1045 1050 1055
 Lys Ala Arg Leu Ile Ala Ser Asn Val Thr Glu Thr Met Gly Ile Asn
 1060 1065 1070
 Gly Ser Ala Tyr Arg Val Phe Pro Tyr Ser Val Phe Tyr Val Phe Tyr
 1075 1080 1085
 Glu Gln Tyr Leu Thr Ile Ile Asp Asp Thr Ile Phe Asn Leu Gly Val
 1090 1095 1100
 Ser Leu Gly Ala Ile Phe Leu Val Thr Met Val Leu Leu Gly Cys Glu
 1105 1110 1115 1120
 Leu Trp Ser Ala Val Ile Met Cys Ala Thr Ile Ala Met Val Leu Val
 1125 1130 1135
 Asn Met Phe Gly Val Met Trp Leu Trp Gly Ile Ser Leu Asn Ala Val
 1140 1145 1150
 Ser Leu Val Asn Leu Val Met Ser Cys Gly Ile Ser Val Glu Phe Cys
 1155 1160 1165
 Ser His Ile Thr Arg Ala Phe Thr Val Ser Met Lys Gly Ser Arg Val
 1170 1175 1180
 Glu Arg Ala Glu Glu Ala Leu Ala His Met Gly Ser Ser Val Phe Ser
 1185 1190 1195 1200
 Gly Ile Thr Leu Thr Lys Phe Gly Gly Ile Val Val Leu Ala Phe Ala
 1205 1210 1215
 Lys Ser Gln Ile Phe Gln Ile Phe Tyr Phe Arg Met Tyr Leu Ala Met
 1220 1225 1230
 Val Leu Leu Gly Ala Thr His Gly Leu Ile Phe Leu Pro Val Leu Leu
 1235 1240 1245
 Ser Tyr Ile Gly Pro Ser Val Asn Lys Ala Lys Ser Cys Ala Thr Glu
 1250 1255 1260
 Glu Arg Tyr Lys Gly Thr Glu Arg Glu Arg Leu Leu Asn Phe
 1265 1270 1275

<210> 5495

<211> 2414

<212> DNA

<213> Homo sapiens

<400> 5495

agacctgcac cgggccaggc aagatggcgg ccatggagac cgagacggcg ccgctgaccc
 60
 tagagtcgct gccaccgat cccctgctcc tcatcttacc ctttttggac tatcgggac
 120
 taatcaactg ttgttatgtc agtcgaagac ttagccagct atcaagtcac gatccgctgt
 180
 ggagaagaca ttgcaaaaaa tactggctga tatctgagga agagaaaaca cagaagaatc
 240
 agtggttgaa atctctcttc atagatactt actctgatgt aggaagatac attgaccatt
 300
 atgctgctat taaaaaggcc tgggatgac tcaagaaata tttggagccc aggtgtcctc
 360
 ggatgggtttt atctctgaaa gaggggtgctc gagaggaaga cctcgatgct gtggaagcgc
 420

										580								585								590		
Asn	Tyr	Lys		Asn	Pro	Asn	Leu	Thr	Ile	Ser	Phe	Thr	Ala	Glu	Arg	Ser												
										595			600			605												
Ile	Glu	Asp	Glu	Leu	Asn	Arg	Glu	Ser	Asp	Ser	Asp	Val	Phe	Thr	Val													
										610			615			620												
Val	Ile	Ser	Tyr	Ala	Ile	Met	Phe	Leu	Tyr	Ile	Ser	Leu	Ala	Leu	Gly													
										625			630			635												
His	Ile	Lys	Ser	Cys	Arg	Arg	Leu	Leu	Val	Asp	Ser	Lys	Val	Ser	Leu													
										645			650			655												
Gly	Ile	Ala	Gly	Ile	Leu	Ile	Val	Leu	Ser	Ser	Val	Ala	Cys	Ser	Leu													
										660			665			670												
Gly	Val	Phe	Ser	Tyr	Ile	Gly	Leu	Pro	Leu	Thr	Leu	Ile	Val	Ile	Glu													
										675			680			685												
Val	Ile	Pro	Phe	Leu	Val	Leu	Ala	Val	Gly	Val	Asp	Asn	Ile	Phe	Ile													
										690			695			700												
Leu	Val	Gln	Ala	Tyr	Gln	Arg	Asp	Glu	Arg	Leu	Gln	Gly	Glu	Thr	Leu													
										705			710			715												
Asp	Gln	Gln	Leu	Gly	Arg	Val	Leu	Gly	Glu	Val	Ala	Pro	Ser	Met	Phe													
										725			730			735												
Leu	Ser	Ser	Phe	Ser	Glu	Thr	Val	Ala	Phe	Phe	Leu	Gly	Ala	Leu	Ser													
										740			745			750												
Val	Met	Pro	Ala	Val	His	Thr	Phe	Ser	Leu	Phe	Ala	Gly	Leu	Ala	Val													
										755			760			765												
Phe	Ile	Asp	Phe	Leu	Leu	Gln	Ile	Thr	Cys	Phe	Val	Ser	Leu	Leu	Gly													
										770			775			780												
Leu	Asp	Ile	Lys	Arg	Gln	Glu	Lys	Asn	Arg	Leu	Asp	Ile	Phe	Cys	Cys													
										785			790			795												
Val	Arg	Gly	Ala	Glu	Asp	Gly	Thr	Ser	Val	Gln	Ala	Ser	Glu	Ser	Cys													
										805			810			815												
Leu	Phe	Arg	Phe	Lys	Asn	Ser	Tyr	Ile	Phe	Val	Gly	Val	Leu	Leu	Lys	Asp												
										820			825			830												
Trp	Met	Arg	Pro	Ile	Val	Ile	Ala	Ile	Phe	Val	Gly	Val	Leu	Ser	Phe													
										835			840			845												
Ser	Ile	Ala	Val	Leu	Asn	Lys	Val	Asp	Ile	Gly	Leu	Asp	Gln	Ser	Leu													
										850			855			860												
Ser	Met	Pro	Asp	Asp	Ser	Tyr	Met	Val	Asp	Tyr	Phe	Lys	Ser	Ile	Ser													
										865			870			875												
Gln	Tyr	Leu	His	Ala	Gly	Pro	Pro	Val	Tyr	Phe	Val	Leu	Glu	Glu	Gly													
										885			890			895												
His	Asp	Tyr	Thr	Ser	Ser	Lys	Gly	Gln	Asn	Met	Val	Cys	Gly	Gly	Met													
										900			905			910												
Gly	Cys	Asn	Asn	Asp	Ser	Leu	Val	Gln	Gln	Ile	Phe	Asn	Ala	Ala	Gln													
										915			920			925												
Leu	Asp	Asn	Tyr	Thr	Arg	Ile	Gly	Phe	Ala	Pro	Ser	Ser	Trp	Ile	Asp													
										930			935			940												
Asp	Tyr	Phe	Asp	Trp	Val	Lys	Pro	Gln	Ser	Ser	Cys	Cys	Arg	Val	Asp													
										945			950			955												
Asn	Ile	Thr	Asp	Gln	Phe	Cys	Asn	Ala	Ser	Val	Val	Asp	Pro	Ala	Cys													
										965			970			975												
Val	Arg	Cys	Arg	Pro	Leu	Thr	Pro																					

```

145          150          155          160
Arg Asp Val Glu Ala Pro Ser Ser Asn Asp Lys Ala Leu Gly Leu Leu
          165          170          175
Cys Gly Lys Asp Ala Asp Ala Cys Asn Ala Thr Asn Trp Ile Glu Tyr
          180          185          190
Met Phe Asn Lys Asp Asn Gly Gln Ala Pro Phe Thr Ile Thr Pro Val
          195          200          205
Phe Ser Asp Phe Pro Val His Gly Met Glu Pro Met Asn Asn Ala Thr
          210          215          220
Lys Gly Cys Asp Glu Ser Val Asp Glu Val Thr Ala Pro Cys Ser Cys
225          230          235          240
Gln Asp Cys Ser Ile Val Cys Gly Pro Lys Pro Gln Pro Pro Pro Pro
          245          250          255
Pro Ala Pro Trp Thr Ile Leu Gly Leu Asp Ala Met Tyr Val Ile Met
          260          265          270
Trp Ile Thr Tyr Met Ala Phe Leu Val Phe Phe Gly Ala Phe Phe
          275          280          285
Ala Val Trp Cys Tyr Arg Lys Arg Tyr Phe Val Ser Glu Tyr Thr Pro
          290          295          300
Ile Asp Ser Asn Ile Ala Phe Ser Val Asn Ala Ser Asp Lys Gly Glu
305          310          315          320
Ala Ser Cys Cys Asp Pro Val Ser Ala Ala Phe Glu Gly Cys Leu Arg
          325          330          335
Arg Leu Phe Thr Arg Trp Gly Ser Phe Cys Val Arg Asn Pro Gly Cys
          340          345          350
Val Ile Phe Phe Ser Leu Val Phe Ile Thr Ala Cys Ser Ser Gly Leu
          355          360          365
Val Phe Val Arg Val Thr Thr Asn Pro Val Asp Leu Trp Ser Ala Pro
          370          375          380
Ser Ser Gln Ala Arg Leu Glu Lys Glu Tyr Phe Asp Gln His Phe Gly
385          390          395          400
Pro Phe Phe Arg Thr Glu Gln Leu Ile Ile Arg Ala Pro Leu Thr Asp
          405          410          415
Lys His Ile Tyr Gln Pro Tyr Pro Ser Gly Ala Asp Val Pro Phe Gly
          420          425          430
Pro Pro Leu Asp Ile Gln Ile Leu His Gln Val Leu Asp Leu Gln Ile
          435          440          445
Ala Ile Glu Asn Ile Thr Ala Ser Tyr Asp Asn Glu Thr Val Thr Leu
          450          455          460
Gln Asp Ile Cys Leu Ala Pro Leu Ser Pro Tyr Asn Thr Asn Cys Thr
465          470          475          480
Ile Leu Ser Val Leu Asn Tyr Phe Gln Asn Ser His Ser Val Leu Asp
          485          490          495
His Lys Lys Gly Asp Asp Phe Phe Val Tyr Ala Asp Tyr His Thr His
          500          505          510
Phe Leu Tyr Cys Val Arg Ala Pro Ala Ser Leu Asn Asp Thr Ser Leu
          515          520          525
Leu His Asp Pro Cys Leu Gly Thr Phe Gly Gly Pro Val Phe Pro Trp
          530          535          540
Leu Val Leu Gly Gly Tyr Asp Asp Gln Asn Tyr Asn Asn Ala Thr Ala
545          550          555          560
Leu Val Ile Thr Phe Pro Val Asn Asn Tyr Tyr Asn Asp Thr Glu Lys
          565          570          575
Leu Gln Arg Ala Gln Ala Trp Glu Lys Glu Phe Ile Asn Phe Val Lys

```

acgttcaggg caaactttcc cgtcctattt aacttcaata tgtgcatctt ttacaggca
 5760
 ccttctcgtg gtagatgata gaggaccacc tccgctcctg tgctgttgga ggtccgagaa
 5820
 tgatgcctca agaagagaac atacagctgc ccgtatatgg tagccattgc gatgtctctt
 5880
 tcggaaaaggc tgggttttagt tgacttaggc gcagctggta attcaatctc aaatttgggc
 5940
 agcttcgaca tagtgccagc cctaaagtga aaaggctgca ggacattctc caggaccgtg
 6000
 gtagacagca agatcacggc gctctcgggg cagtacatgt accaattcac attgagattg
 6060
 tggctcttca agagtttcag actccgtttc tctggtaata cctggtaaaa ttcgattcct
 6120
 tgatctgtta tgaagacaat ttcagttgaa ctagtccagc agaatcctag aatggttgga
 6180
 ttcttagtct tgcactcctg tgtgtattcc agctgggaat tatcagggat aaaattacaa
 6240
 aaatccacag tctttgaggt cctctgaaca gccaatatct tattttctaa ggaaaactta
 6300
 atgcatttca cttctccttt gtcattccatt ctaaatagaga tgggattcct atcatctggg
 6360
 cctttaacta ccacgccagt agctccacca gatcgaacag caaaaacctg cttgttggcc
 6420
 tcatcgaaga agacgcagtt gacagggttc gccttctcga actgcaccgg ccgctcgcac
 6480
 agctccagat agtagtcctc ctgcgccatg gcgggcgccg cgcccgcggc gggggccc
 6538

<210> 5494

<211> 1278

<212> PRT

<213> Homo sapiens

<400> 5494

Met	Thr	Ala	Arg	Gly	Leu	Ala	Leu	Gly	Leu	Leu	Leu	Leu	Leu	Cys
1				5				10					15	
Pro	Ala	Gln	Val	Phe	Ser	Gln	Ser	Cys	Val	Trp	Tyr	Gly	Glu	Cys
		20						25					30	Gly
Ile	Ala	Tyr	Gly	Asp	Lys	Arg	Tyr	Asn	Cys	Glu	Tyr	Ser	Gly	Pro
		35					40					45		Pro
Lys	Pro	Leu	Pro	Lys	Asp	Gly	Tyr	Asp	Leu	Val	Gln	Glu	Leu	Cys
		50				55					60			Pro
Gly	Phe	Phe	Phe	Gly	Asn	Val	Ser	Leu	Cys	Cys	Asp	Val	Arg	Gln
65					70					75				80
Gln	Thr	Leu	Lys	Asp	Asn	Leu	Gln	Leu	Pro	Leu	Gln	Phe	Leu	Ser
			85					90					95	Arg
Cys	Pro	Ser	Cys	Phe	Tyr	Asn	Leu	Leu	Asn	Leu	Phe	Cys	Glu	Leu
			100					105					110	Thr
Cys	Ser	Pro	Arg	Gln	Ser	Gln	Phe	Leu	Asn	Val	Thr	Ala	Thr	Glu
		115				120						125		Asp
Tyr	Val	Asp	Pro	Val	Thr	Asn	Gln	Thr	Lys	Thr	Asn	Val	Lys	Glu
	130					135					140			Leu
Gln	Tyr	Tyr	Val	Gly	Gln	Ser	Phe	Ala	Asn	Ala	Met	Tyr	Asn	Ala
														Cys

gccaaagtga acaccggatg gtgccaacca tcggttgttt ggcagcagct ttgaacgtag
4140
cgctcttgaa ctcaggaatg cacagttgac ttgggaagca gtattactag atctggaggc
4200
aaccacagga cactaaactt ctcccagcct cttcaggaaa gaaacctcat tctttggcaa
4260
gcaggagggtg acactagatg gctgtgaatg tgatccgctc actgacactc tgtaaaggcc
4320
aatcaatgca ctgtctgtct ctcttttttag gagtaagcca tcccacaagt tctataccat
4380
atttttagtg acagttgagg ttgtagatac actttataac attttatagt ttaaagagct
4440
ttattaatgc aataaattaa ctttgtacac attttatat aaaaaaacag caagtgattt
4500
cagaatgttg taggcctcat tagagcttgg tctccaaaaa tctgtttgaa aaaagcaaca
4560
tgttcttcac agtggtcccc tgggttgaaa ttggggctcc ctcgcaaacg ctggtttcgc
4620
tgttcaaaaa agcggaatat tgtatagaaa agcatgttgt cttcagtctg ctttgcagca
4680
tctaaaaatt ttcgtgcaga aatgttgtca tggccaccaa tgccccgat aaaccttaag
4740
gcagctaaca cttgggtgtt ggaaaggaga acttctacta tttcatcatt tgctgttgaa
4800
agtcgcttca gcatgtccag agatagctga tgagcaggag gatagaaact ctctagggat
4860
aacagcagac aagccaaagg tttggagtcg ctgaggacgt ggtactgcag gaactgatgc
4920
agcatataaa agaggttggt ctggacaagg gttttgataa caagttcatg taggtaatgc
4980
tgtactgcaa tctgaaactg gttaagagaa cgaatgtatt ccatcagcac ggctatcaca
5040
aatattatgag gcatctcctt cttttgccga tagtgtttaa atactccgta gaggaagaaa
5100
tccacgaagg ctgacaggac atgggtgtac acatctgact ggtccagcac cgcttgggtc
5160
cgcaaccggc tcttgaggag cgggctgctt cggctctgcc ctgcttccac cgccatcgca
5220
taactctgct cggcatccag gtacttttta tactcatggt tgagtttatc aaaaacagtg
5280
gctatcacgg gcagcgatgc tctgtctgac tcaacttaaca tctgtgaaca gacagacagg
5340
atgaccatct tgcattcctt tctctggagg agaaagtcca tgagtcttcc tttgtctggt
5400
aagagattta ctatgggctc aagtttcact tggagggttc agaggtaacc ttggcttgcg
5460
ctgataatga tgtcagggtg aaagacaatc caagatgaag aatagagttt acatggaaca
5520
ggagactggc tggtcacggc agcaggacct gtgatgggga tctgataggg ctggatcgat
5580
cgagcgggaa gcacgggggtg gtggaaggta acggagccgt caaactctcc ccgtaacttg
5640
atatcgaata ttaccgatgt ctctgtatcc tgatgatgca cgactaccag gttgtccacc
5700

ttggcagtct tcattgactt tcttctgcag attacctgtt tcgtgagtct cttgggggta
2520
gacattaaac gtcaagagaa aaatcggcta gacatctttt gctgtgtcag aggtgctgaa
2580
gatggaacaa gcgtccaggc ctcagagagc tgtttggttc gcttcttcaa aaactcctat
2640
tctccacttc tgctaaagga ctggatgaga ccaattgtga tagcaatatt tgtgggtgtt
2700
ctgtcattca gcctcgcagt cctgaacaaa gtagatattg gattggatca gtctctttcg
2760
atgccagatg actcctacat ggtggattat ttcaaatacca tcagtcagta cctgcatgag
2820
ggccgcctg tgtactttgt cctggaggaa gggcacgact acacttcttc caaggggagc
2880
aacatgggtg gcggcggcat gggctgcaac aatgattccc tggcgagca gatatttaac
2940
gcggcgcagc tggacaatta taccgaata ggcttcgccc cctcgtcctg gatcgacgat
3000
tatttcgact ggggtgaagcc acagtcgtct tgctgtcagc tggacaatat cactgaccag
3060
ttctgcaatg cttcagtggt tgaccctgcc tgcgttcgct gcaggcctct gactccggga
3120
ggcaaacaga ggccctcaggg gggagacttc atgagattcc tgcccatggt cctttcggat
3180
aacccataacc ccaagtgtgg caaaggggga catgctgcct atagttctgc agttaacatc
3240
ctccttgccc atggcaccag ggtcggagcc acgtacttca tgacctacca caccgtgctg
3300
cagacctctg ctgactttat tgacgtctctg aagaaagccc gacttatagc cagtaatgtc
3360
accgaaacca tgggcattaa cggcagtgcc taccgagtat ttccttacag tgtgttttat
3420
gtcttctacg aacagtacct gaccatcatt gacgacacta tcttcaacct cgggtgtgtc
3480
ctgggcgcga tatttctggt gaccatggct ctccctgggt gtgagctctg gtctgcagtc
3540
atcatgtgtg ccaccatcgc catggtcttg gtcaacatgt ttggagttat gtggctctgg
3600
ggcatcagtc tgaacgtgt atccttggtc aacctgggtga tgagctgtgg catctccgtg
3660
gagttctgca gccacataac cagagcgttc acggtgagca tgaaaggcag ccgctggag
3720
cgcgcggaag aggcacttgc ccacatgggc agctccgtgt tcagtggaaat cacacttaca
3780
aaatttgag ggattgtggt gttggctttt gccaaatctc aaattttcca gatattctac
3840
ttcaggatgt atttggccat ggtcttactg ggagccactc acggattaat atttctccct
3900
gtcttactca gttacatagg gccatcagta aataaagcca aaagtgtgtc cactgaagag
3960
cgatacaaag gaacagagcg cgaacgggct ctaaatttct agccctctcg cagggcatcc
4020
tgactgaact gtgtctaagg gtcggtcggt ttaccactgg acgggtgctg catcggcaag
4080

ggctgtgacg agtctgtgga tgaggtcaca gcaccatgta gctgccaaga ctgctctatt
900
gtctgtggcc ccaagcccca gccccacct cctctgctc cctggacgat ccttggttg
960
gacgccatgt atgtcatcat gtggatcacc tacatggcgt ttttgcttgt gttttttgga
1020
gcattttttg cagtgtggtg ctacagaaaa cggatatttg tctccgagta cactcccatc
1080
gatagcaata tagctttttc tgttaatgca agtgacaaag gagaggcgtc ctgctgtgac
1140
cctgtcagcg cagcatttga gggctgcttg aggcggctgt tcacacgctg ggggtctttc
1200
tgcgtccgaa accctggctg tgtcattttc ttctcgtctg tcttcattac tgcgtgttcg
1260
tcaggcctgg tgtttgtccg ggtcacaacc aatccagtgt acctctggtc agcccccage
1320
agccaggctc gcctggaaaa agagtacttt gaccagcact ttgggccttt cttccggacg
1380
gagcagctca tcattccgggc cctctcact gacaaacaca tttaccagcc atacccttcg
1440
ggagctgatg tacccttttg acctccgctt gacatacaga tactgcacca ggttcttgac
1500
ttacaaatag ccatcgaaaa cattactgcc tcttatgaca atgagactgt gacacttcaa
1560
gacatctgct tggccctctt ttcaccgtat aacacgaact gcaccatttt gagtgtgtta
1620
aattacttcc agaacagcca ttccgtgctg gaccacaaga aaggggacga cttctttgtg
1680
tatgccgatt accacacgca ctttctgtac tgcgtacggg ctctgcctc tctgaatgat
1740
acaagtttgc tccatgacct ttgtctgggt acgtttggtg gaccagtgtt cccgtggctt
1800
gtgttgggag gctatgatga tcaaaactac aataacgcca ctgcccttgt gattaccttc
1860
cctgtcaata attactataa tgatacagag aagctccaga gggcccaggc ctgggaaaaa
1920
gagtttatta attttgtgaa aaactacaag aatcccaatc tgaccatttc cttcactgct
1980
gaacgaagta ttgaagatga actaaatcgt gaaagtgaca gtgatgtctt caccgttgta
2040
attagctatg ccatcatggt tctatatatt tccctagcct tggggcacat caaaagctgt
2100
cgcaggcttc tgggtggattc gaaggctctc ctaggcacgc cgggcacctt gatcgtgctg
2160
agctcgggtg cttgctcctt ggggtgtctc agctacattg ggttgccctt gaccctcatt
2220
gtgattgaag tcattccggt cctgggtgctg gctgttgag tggacaacat cttcattctg
2280
gtgcaggcct accagagaga tgaacgtctt caaggggaaa cctggatca gcagctgggc
2340
agggctcctag gagaagtggc tcccagtatg ttctgtcat ctttttctga gactgtagca
2400
tttttcttag gagcattgtc cgtgatgcca gcgtgcaca cttctctctt ctttgcgggg
2460

450 455 460
 Ser Pro Lys Ser Ala Val Lys Thr Arg Gln Ala Phe Phe Leu His Thr
 465 470 475 480
 Thr Tyr Phe Thr Lys Phe Ala Arg Gln Val Cys Lys Asn Thr Leu Arg
 485 490 495
 Leu Arg Gln Ala Ala Arg Arg Pro Phe Val Ala Ile Asn Tyr Ala Ala
 500 505 510
 Ile Arg Ala Glu Tyr Ala Asp Arg His Ala Glu Leu Ser Gly Ser Pro
 515 520 525
 Leu Lys Ser Lys Ser Thr Arg Lys Pro Leu Ala Cys Ile Ile Gly Tyr
 530 535 540
 Leu Glu Ile His Pro Ala Lys Lys Pro Asn Val Ile Arg Ser Thr Pro
 545 550 555 560
 Ser Leu Gln Thr Pro Thr Thr Lys Arg Met Leu Thr Thr Pro Asn His
 565 570 575
 Thr Ser Leu Ser Ile Leu Gly Lys Arg Asn Tyr Ser His His Asn Gly
 580 585 590
 Leu Asp Glu Leu Thr Cys Cys Val Ser Asp
 595 600

<210> 5493

<211> 6538

<212> DNA

<213> Homo sapiens

<400> 5493

nncttcctga ccggcgcgcg cagcctgctg ccgcgggtcag cgcttgetcc tgctcctccg
 60
 ctctcctctgc gcggggtgct gaaacagccc ggggaagtag agccgcctcc ggggagccca
 120
 accagccgaa cgccgcccgc gtcagcagcc ttgcgcggcc acagcatgac cgctcgcggc
 180
 ctggcccttg gcctcctcct gctgctactg tgtccagcgc aggtgttttc acagtccctgt
 240
 gtttggtatg gagagtgtgg aattgcatat ggggacaaga ggtacaattg cgaatattct
 300
 ggcccaccaa aaccattgcc aaaggatgga tatgacttag tgcaggaact ctgtccagga
 360
 ttcttctttg gcaatgtcag tctctgttgt gatgttcggc agcttcagac actaaaagac
 420
 aacctgcagc tgccctctaca gtttctgtcc agatgtccat cctgttttta taacctactg
 480
 aacctgtttt gtgagctgac atgtagccct cgacagagtc agtttttgaa tgttacagct
 540
 actgaagatt atgttgatcc tgttacaaac cagacgaaaa caaatgtgaa agagttacaa
 600
 tactacgtcg gacagagttt tgccaatgca atgtacaatg cctgccggga tgtggaggcc
 660
 ccctcaagta atgacaaggc cctgggactc ctgtgtggga aggacgctga cgctgtaat
 720
 gccaccaact ggattgaata catgttcaat aaggacaatg gacaggcacc ttttaccatc
 780
 actcctgtgt tttcagattt tccagtcctat gggatggagc ccatgaacaa tgccacaaaa
 840

```

                20                25                30
Arg Arg Ile Glu Glu Leu Asn Lys Thr Ala Ser Gly Asn Val Glu Ala
      35                40                45
Lys Val Val Cys Phe Tyr Arg Arg Arg Asp Ile Ser Asn Thr Leu Ile
      50                55                60
Met Leu Ala Asp Lys His Ala Lys Glu Ile Glu Glu Glu Ser Glu Thr
      65                70                75                80
Thr Val Glu Ala Asp Leu Thr Asp Lys Gln Lys His Gln Leu Lys His
      85                90                95
Arg Glu Leu Phe Leu Ser Arg Gln Tyr Glu Ser Leu Pro Ala Thr His
      100                105                110
Ile Arg Gly Lys Cys Ser Val Ala Leu Leu Asn Glu Thr Glu Ser Val
      115                120                125
Leu Ser Tyr Leu Asp Lys Glu Asp Thr Phe Phe Tyr Ser Leu Val Tyr
      130                135                140
Asp Pro Ser Leu Lys Thr Leu Leu Ala Asp Lys Gly Glu Ile Arg Val
      145                150                155                160
Gly Pro Arg Tyr Gln Ala Asp Ile Pro Glu Met Leu Leu Glu Gly Glu
      165                170                175
Ser Asp Glu Arg Glu Gln Ser Lys Leu Glu Val Lys Val Trp Asp Pro
      180                185                190
Asn Ser Pro Leu Thr Asp Arg Gln Ile Asp Gln Phe Leu Val Val Ala
      195                200                205
Arg Ala Val Gly Thr Phe Ala Arg Ala Leu Asp Cys Ser Ser Ser Val
      210                215                220
Arg Gln Pro Ser Leu His Met Ser Ala Ala Ala Ser Arg Asp Ile
      225                230                235                240
Thr Leu Phe His Ala Met Asp Thr Leu Tyr Arg His Ser Tyr Asp Leu
      245                250                255
Ser Ser Ala Ile Ser Val Leu Val Pro Leu Gly Gly Pro Val Leu Cys
      260                265                270
Arg Asp Glu Met Glu Glu Trp Ser Ala Ser Glu Ala Ser Leu Phe Glu
      275                280                285
Glu Ala Leu Glu Lys Tyr Gly Lys Asp Phe Asn Asp Ile Arg Gln Asp
      290                295                300
Phe Leu Pro Trp Lys Ser Leu Thr Ser Ile Ile Glu Tyr Tyr Tyr Met
      305                310                315                320
Trp Lys Thr Thr Asp Arg Tyr Val Gln Gln Lys Arg Leu Lys Ala Ala
      325                330                335
Glu Ala Glu Ser Lys Leu Lys Gln Val Tyr Ile Pro Thr Tyr Ser Lys
      340                345                350
Pro Asn Pro Asn Gln Ile Ser Thr Ser Asn Gly Lys Pro Gly Ala Val
      355                360                365
Asn Gly Ala Val Gly Thr Thr Phe Gln Pro Gln Asn Pro Leu Leu Gly
      370                375                380
Arg Ala Cys Glu Ser Cys Tyr Ala Thr Gln Ser His Gln Trp Tyr Ser
      385                390                395                400
Trp Gly Pro Pro Asn Met Gln Cys Arg Leu Cys Ala Ile Cys Trp Leu
      405                410                415
Tyr Trp Lys Lys Tyr Gly Gly Leu Lys Met Pro Thr Gln Ser Glu Glu
      420                425                430
Glu Lys Leu Ser Pro Ser Pro Thr Thr Glu Asp Pro Arg Val Arg Ser
      435                440                445
His Val Ser Arg Gln Ala Met Gln Gly Met Pro Val Arg Asn Thr Gly

```

gctccctttc tggggccatg gtgtccctgc tgtgtgtcag tggcatgtca ctgtgggtca
 4320
 gtgagcacat ggggtggacgt gcagagactg tctgcgcagc cccagcaga catgcccctg
 4380
 gggtgaggac acaggctctg caggctatct cccctctgg ctgagtcac gcctgcccac
 4440
 ccttcacttc ttaaagggtgc gcaagagagg agggccgact ggaggggtgc gccggaagg
 4500
 ttcagcctgc cttcacat tccccttggt cacagcccag tttccatctc tcagggccca
 4560
 cccaggaaaa tggatttcaa gtgggggttt tcatccagag atttgttta caaaaaaca
 4620
 gaaaagctga gaggcaaac aggggagtga ggggcaacc agaggtggg aacaacaaca
 4680
 gcaagccgcc cccatcctgt gactggctgg gcaccaggg aggacgcgtc accagagcct
 4740
 ggggccaagg cactggggg acctgccaca ctgtggacct gtctgggtgg ggctggagcc
 4800
 tcgagaagcc atgattcttg tcagaaacat tccccaggc agagagagg ggccccagcc
 4860
 tctccctcc tcttggcctc cagagtcctg cagggtgcctc acagtagtga aaccagttg
 4920
 gaagcagctg ccctgggagc ctgggacagg cgaccaccg ggtcagtcct ctgccactca
 4980
 gagcagagca gggggctgag ggcaagcagg tggggctgtg cgtggcctca gtgcactcg
 5040
 tgtcatgtct gagcctggtg tttatgcccc actgctgtcc taagtcctg gcgaggggag
 5100
 gtggaggagc tgccccgtgg gtgtttggag attctgtttt actctgccta gagaggaaac
 5160
 ggctttgggg agggaggggg aagcctttat tctttactgt tgtccctgtt ttcctttggg
 5220
 ggaatttact cagttagcag cccctcctca ccattcccc caggaaggcc atgtcccagt
 5280
 tttctgtcca cccctcctgt tctctgcac tatgtctctg attttccctg ccagggaagc
 5340
 taaccagag cacgcacctg tgctcatgag tgtttccgca ggataattcg ttctgagcat
 5400
 gataccacag tgtggattgt ctgtctgtaa ggagatgcca tctactaacc aatttgatt
 5460
 gtgtttccaa taaattcctg gaaattttgc ctggttttat gctgttcttt actaggatga
 5520
 tggtcaggt gtaagactgt gcacgcacc ctagg
 5555

<210> 5492

<211> 602

<212> PRT

<213> Homo sapiens

<400> 5492

Asp	Trp	Arg	Leu	Pro	Thr	Arg	Ala	Ala	Thr	Gly	Gly	Phe	Pro	Arg	Asp
1				5					10				15		
Arg	Asp	Tyr	Val	Tyr	Phe	Glu	Asn	Ser	Ser	Ser	Asn	Pro	Tyr	Leu	Ile

actggtgttc tgcccggctc tgcttgggtca cagacagctc cagcaagagc agttgttaaa
2700
agtgccaaagc gtgtgtatca ctgtgacaag ccgtttgctt actgccctgt tcccttgagc
2760
ccaaaccagc tgatgaagaa ctgctgccag gtgggtccta cagcaggtca caaatgacct
2820
agtttcattt taagcagaca gactctgttt ggcctagagg tgtggagtga gagaactgtg
2880
tttgtgggta tgagtctgtg tggccaaccc catgaccccc acccctccag cccaacatct
2940
tgtgagcaca tgtgacctag gccccggggg acctgacctg tcctttggct tgggtcttct
3000
gtgtttccca cctgccctcg gcaagagccc ttggtggcat cacagttggc cactcagctg
3060
tgctgagtag ctgtgctact tgtgtggca gctgcaagga taggaatagc tcagcgcccc
3120
atgagctccc tgagcagatg tgaggctggc aactcccctg ccctctgttt gcaggcacag
3180
ggtcacagtc ccaagaaaga caactggagt ctgatctccc agccatctct ggggttacta
3240
ggaggcagct ggatggcaga tacgagaggc ccaaatagcc aagctgttgc aagacagagt
3300
ggctacaatt gaattgacac cctgggaagc acgaggtaac ttggttaagga taatgatgct
3360
gtagatgtct gtgtcctcgg aggtgagct ccgcttggca gagagagcgt gctgtgtgag
3420
gtggagggcg gttttgcaga catctcagct tcttttctga ggaggagttg gttctcatct
3480
taggcttctg caagggcgag catgggatgt ctccaccacc acccactctt ggagctgtgc
3540
tgggtcttgg cttggggcgc tgagggtggg gcctgtgtca gaagcatttg gtgagagggg
3600
tggaggtggc aggcaggggt tctcctcagg gttccactg aggggtccct tcagcaaaga
3660
cctgggagga ggtgcgcag catctggatg tttcttcctt aaagaaaaag acacaggaaa
3720
gctgtctgtc tgtaccctgc tctggattta ttgtcgtact tggaccaga aggggaaatg
3780
attccctcac cttttcactt tctctctgaa ccctactaa gtggtgactg cagattctgg
3840
aaacaattag ctgcccgtga ctcagctgcc agcttcattt tctctgcctt ttgggagagg
3900
ccctctcacc caggcccaag agatttggag acaggagtca ggccaggtct gaagcaggag
3960
aaggagggcc cctcctatct acccagttga catttggtt tgggaaaagc gcagcttgtt
4020
cgagccacgt gtgccaagca ggcttttctt tctcttgta agtaaagctc gtggttctgt
4080
agtccagtca tcttaggagg gtgatgttga ctgagacttc acgctctccc tttgtctctg
4140
gaaactgccc cctcgttctg acagaatccc ccaggcaatg gaggaagggt gccgaggcgc
4200
ctctagtctg tgcctttgcc gttggaagca ttggtgctg agagggttct ccagccaccc
4260

gacttcaatg acatacggca agattttctt ccttggaat cattgactag catcattgaa
1080
tattattaca tgtggaaaac tactgacaga tatgtgcaac agaaacgtct aaaagcagca
1140
gaagctgaga gtaaactgaa acaagtatat atcccaacct acagcaaacc aaatcccaac
1200
caaatatcca ctagtaatgg gaagcctggt gctgtgaatg gagctgtggg gaccacgttc
1260
cagcctcaga atcctctctt agggagagcc tgtgagagct gctatgctac acagtctcac
1320
cagtgggtatt cttggggccc acctaatatg cagtgtagat tatgtgcaat ttgttggttc
1380
tattggaaaa aatatggagg cttgaaaatg cccaccagc cagaagaaga gaagttatct
1440
cctagcccaa ctacagagga ccctcgtgtt agaagtcacg tgtcccgcca ggccatgcag
1500
ggaatgccag tccgaaacac tgggagtcca aagtctgcag tgaagaccg ccaagcttcc
1560
ttccttcata ctacatattt cacaaaattt gctcgtcagg tctgcaaaaa taccctccg
1620
ctgcggcagg cagcaagacg gccgtttgtt gctattaatt atgctgcat tagggcagaa
1680
tatgccgaca gacatgctga actatctgga agtccactga aaagcaaaag cactaggaag
1740
cctttggcat gtatcattgg gtatttagag atccatcctg caaagaaacc taatgtaatt
1800
cgatctacac caagcctgca aaccccaact accaagcgga tgctaacaac tccaaatcac
1860
acatctctga gcattctggg gaaaagaaac tacagtcac acaatggtct ggatgaactc
1920
acgtgctgtg tgtcagactg agctttccct gattcattct acaatccaag acttgctgca
1980
ctgtcctgct gatgttcaca gccgtgcctg ggaagaaggc agccccactc ccagtacatt
2040
tcagtgggag acctctgcgt gcattccatgg agacgcaatg gggcggggaa ggaactgtgg
2100
gagtgcacgt tccaaatcct gtgtctccac gtgtggatca gcagcacctc gctttcttgt
2160
cagagacctc gctgttacgg agcgagacct gctgagaatt gaggggctga gggaaccctc
2220
ccacctcctc cttctgcag cgcctgcgc cccaccagc aacagcgcc acttggcagt
2280
gggctgctg caagctcaga gccgtgcca cctgcatgt gtccgctcag ctgggtctta
2340
tgctgtatag ttactaaata tgtacaggag ggccatggca tctttctgaa tggatttttc
2400
ttaagaaatg cgccagtgtt tatgaggttc aaggtatttc cctgtccttg ctgttaccgt
2460
cactcagctt tttctcgata ggcttcatcc ttgttttttt gaaatggggg aatttgctgt
2520
ttaccctctg cattcctata tgtgaccctc cctcctactc ctccaaggaa cagaattacc
2580
gaggttctga caaaagataa gcctgtaaac tcatcatctg tgttttgtgg ttggagagaa
2640

```

                260                265                270
Pro Val Val Ile Asn Lys Val Phe Lys Asp Trp Lys Pro Gly Gly Val
                275                280                285
Ile Ser Cys Arg Asn Cys Gly Glu Val Trp Gly Leu Gln Met Ile Tyr
                290                295                300
Lys Ser Val Lys Leu Pro Val Leu Lys Val Arg Ser Met Leu Leu Glu
305                310                315                320
Thr Pro Gln Gly Arg Ile Gln Ala Lys Lys Trp Ser Arg Val Pro Phe
                325                330                335
Ser Val Pro Asp Phe Asp Phe Leu Gln His Cys Ala Glu Asn Leu Ser
                340                345                350
Asp Leu Ser Leu Asp
                355

```

<210> 5491

<211> 5555

<212> DNA

<213> Homo sapiens

<400> 5491

```

nntggcgagg cggaagcac ccggaatctt cctggcccta gagcctgcag gctccaggcc
60
ggccccttga atctcaccgc gaggaaggca ccctgctgcc tgcacttatt tgcattcaag
120
agtttgcatt gagactggcg cttgcctact agggcagcca cagggggggt cccagggac
180
agagattatg tctactttga gaattcctcc agcaacccat acctaataag aaggatagaa
240
gaactcaaca agactgcaag tggcaacgtg gaagcaaaag tagtatgctt ttatagacga
300
cgtgatattt ccaacacact tataatgctc gcagataagc atgctaaaga aattgaggaa
360
gaatctgaaa caacagttga ggctgacttg accgataagc agaaacatca gttgaaacat
420
agggaaactct ttttgtcacg ccagtatgaa tctctgcccg caacacatat caggggaaa
480
tgcaagtgtt cccttctgaa tgagacagaa tcagtattgt catatcttga taaggaggat
540
accttcttct actcattggt ctatgacccc tcattgaaaa cactattagc tgacaaaggt
600
gaaatcagag tgggacctag atatcaagca gacattccag aaatgctgtt agaaggagaa
660
tcagatgaga gggaacaatc aaaattggaa gttaaagttt gggatccaaa tagccactt
720
acggatcgac agattgacca gtttttagtt gtagcacgtg ctggtgggac attcgccaga
780
gccctggatt gcagcagttc tgtgaggcag cctagtttgc atatgagtgc tgctgcagct
840
tcccagagaca tcacctgtt tcacgctatg gatacattgt atagacacag ctatgatttg
900
agcagtgcc aatgtgtctt agtaccactc ggaggacctg ttttatgcag agatgaaatg
960
gaggaatggt cagcctctga agctagctta tttgaagagg cactggaaaa atatggcaaa
1020

```


cattgtgccg agaacttgtc ggacctctcc ctggactgac cacctcattg ctgcagtgcc
 1260
 cgggtttgggc tgtagggggc gggagagtct gcagcagact ccaggcccct ccttctgaa
 1320
 tcatcagctg tgggcatcag gcccaccagc cacacaggag tcctgggcac cctggcttag
 1380
 gctccccgaa tgggaaaaca accggagggc cagagcttag tccagacctt ccttgtaagg
 1440
 acatagacat tttcatatgc actggatgga gttaggga aa ctgaggcaaa agaatttgcc
 1500
 atactgtact cagaatcacg acattccttc cctaccaagg ccacttctat tttttgaggc
 1560
 tcctcataaa aataaatgaa aaaatgggat agaaaaaaaa
 1600

<210> 5490

<211> 357

<212> PRT

<213> Homo sapiens

<400> 5490

His	Asp	Ala	Pro	Arg	Val	Gln	Ile	Gly	Thr	Glu	Leu	Gln	Asp	Val	Val
1				5					10				15		
Asp	Gly	Pro	Ile	Glu	Phe	Gly	Gly	Pro	Glu	Asn	Pro	Lys	Leu	Glu	Met
			20					25					30		
Leu	Glu	Lys	Ile	Leu	Gln	Arg	Gln	Phe	Ser	Ser	Ser	Asn	Ser	Pro	Arg
		35					40					45			
Gly	Ile	Ile	Phe	Thr	Arg	Thr	Arg	Gln	Ser	Ala	His	Ser	Leu	Leu	Leu
	50				55						60				
Trp	Leu	Gln	Gln	Gln	Gln	Gly	Leu	Gln	Thr	Val	Asp	Ile	Arg	Ala	Gln
65				70					75					80	
Leu	Leu	Ile	Gly	Ala	Gly	Asn	Ser	Ser	Gln	Ser	Thr	His	Met	Thr	Gln
			85					90					95		
Arg	Asp	Gln	Gln	Glu	Val	Ile	Gln	Lys	Phe	Gln	Asp	Gly	Thr	Leu	Asn
		100						105				110			
Leu	Leu	Val	Ala	Thr	Ser	Val	Ala	Glu	Glu	Gly	Leu	Asp	Ile	Pro	His
		115				120					125				
Cys	Asn	Val	Val	Val	Arg	Tyr	Gly	Leu	Leu	Thr	Asn	Glu	Ile	Ser	Met
	130				135						140				
Val	Gln	Ala	Arg	Gly	Arg	Ala	Arg	Ala	Asp	Gln	Ser	Val	Tyr	Ala	Phe
145				150					155					160	
Val	Ala	Thr	Glu	Gly	Ser	Arg	Glu	Leu	Lys	Arg	Glu	Leu	Ile	Asn	Glu
		165					170						175		
Ala	Leu	Glu	Thr	Leu	Met	Glu	Gln	Ala	Val	Ala	Ala	Val	Gln	Lys	Met
		180					185					190			
Asp	Gln	Ala	Glu	Tyr	Gln	Ala	Lys	Ile	Arg	Asp	Leu	Gln	Gln	Ala	Ala
	195					200					205				
Leu	Thr	Lys	Arg	Ala	Ala	Gln	Ala	Ala	Gln	Arg	Glu	Asn	Gln	Arg	Gln
	210				215						220				
Gln	Phe	Pro	Val	Glu	His	Val	Gln	Leu	Leu	Cys	Ile	Asn	Cys	Met	Val
225				230					235					240	
Ala	Val	Gly	His	Gly	Ser	Asp	Leu	Arg	Lys	Val	Glu	Gly	Thr	His	His
		245					250						255		
Val	Asn	Val	Asn	Pro	Asn	Phe	Ser	Asn	Tyr	Tyr	Asn	Val	Ser	Arg	Asp

210		215		220	
Gln Leu Asn Gly Leu Ala Gly Tyr Phe Lys Gly Ile Gln Ala Arg Val					
225		230		235	240
Ile Tyr Gln Met Pro Ser Thr Ala Ile Ser Trp Ser Val Tyr Glu Phe					
	245		250		255
Phe Lys Tyr Phe Leu Thr Lys Arg Gln Leu Glu Asn Arg Ala Pro Tyr					
	260		265		270

<210> 5489

<211> 1600

<212> DNA

<213> Homo sapiens

<400> 5489

aaatttcggt ctcaactcag gcatctccag gtgggtcatgg atttgggtcca tgagcttctt
 60
 cagcaagtcc ccaaacggat cctgggtgctg cctgtggcag aggttggtact gtttgcaagg
 120
 ctgttggtg tgctcctgca gctgggggca gcagttcttg ggtgacatga tgcaccacgt
 180
 gtccaaattg gcacagagct gcaggacgtg gttgatggcc ccatcgagtt tggaggccca
 240
 gagaatccaa aactggagat gctggaaaag atcctgcaaa ggcagttcag tagctctaac
 300
 agccctcggt gtatcatctt caccgcacc cgccaaagcg cacactcctt cctgctctgg
 360
 ctccagcagc agcagggcct gcagactgtg gacatccggg ccagctact gattgggggt
 420
 gggaacagca gccagagcac ccacatgacc cagagggacc agcaagaagt gatccagaag
 480
 ttccaagatg gaaccctgaa ccttctggtg gccacgagtg tggcggagga ggggctggac
 540
 atcccacatt gcaatgtggt ggtgctgtat gggctcttga ccaatgaaat ctccatggtc
 600
 caggccaggg gccgtgcccg ggccgatcag agtggtatag cgttttagtc aactgaagg
 660
 agccgggagc tgaagcggga gctgatcaac gaggcgctgg agacgctgat ggagcaggca
 720
 gtggctgctg tgcagaaaat ggaccaggcc gagtaccagg ccaagatccg ggatctgcag
 780
 caggcagcct tgaccaagcg ggcggcccag gcagcccagc gggagaacca gcggcagcag
 840
 ttcccagtg agcacgtgca gctactctgc atcaactgca tgggtggctgt gggccatggc
 900
 agcgacctgc ggaagggtgga gggcaccac catgtcaatg tgaacccaa cttctcgaac
 960
 tactataatg tctccaggga tctgtgtgct atcaacaaag tcttcaagga ctggaagcct
 1020
 ggggggtgca tcagctgcag gaactgtggg gaggtctggg gtctgcagat gatctacaag
 1080
 tcagtgaagc tgccagtgtc caaagtccgc agcatgtgtc tggagacccc tcaggggctg
 1140
 atccaggcca aaaagtgtgc ccgctgccc ttctccgtgc ctgactttga cttctgcag
 1200

ttttttttgc aggggtgctgc ctatgggccc tctgctcccc aatgccttag agagaggagg
 1200
 ggacgggacg gcacggccgc tcaccggaag gctgtgtgcg gggacatccg aggtgggtggt
 1260
 ggacaggaag gacttgggaa ggggagcgag aaattgcttt ttctcttccct ccctgggcag
 1320
 aatgtagctt ttctgcttca ctgtggcagc ctctccctg gatccttaga tcccagagga
 1380
 gggaagaaaa tttgcagtga ctgaaaacag taaaaaaaaa aaaatttatg tatataaaag
 1440
 ttgcattaca cagtacaaaa tagatggata atgtttatcc tttatttttc tatgtagaag
 1500
 tttttgaatt tgtgtgtgtg cttgtgctg tctacaccta gtattacggc tgggactctc
 1560
 cagctgtttt tgttgttgtt atgtttttta gagggttgaa ttcttccatc aggtgaacga
 1620
 aaaaggcaac aaagtaataa atcagtgaat gtggccggca gctgtgttta gccctccag
 1680
 atggaagttt cacttgaatg taaaataata aagttt
 1716

<210> 5488

<211> 272

<212> PRT

<213> Homo sapiens

<400> 5488

Leu	Gly	Leu	Gln	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro	Lys	Ala
1				5					10					15	
Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Arg	Thr	Glu
			20					25					30		
Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met	Gly	Ala
		35					40					45			
Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met	Lys	Arg
		50				55					60				
Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu	Ala	Asn
65					70					75				80	
Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu	Leu	His	Asp	Ala	Val	Met	Asn
				85				90						95	
Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu	Gln	Met	Tyr	Asn	Ser	Gln	His
			100					105						110	
Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr	Val	Trp	Arg	Thr	Glu	Gly	Leu
		115						120					125		
Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr	Gln	Leu	Thr	Met	Asn	Ile	Pro
		130				135					140				
Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr	Glu	Phe	Leu	Gln	Glu	Gln	Val
145				150					155					160	
Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln	Ser	His	Ile	Ile	Ser	Gly	Gly
				165				170						175	
Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	Ala	Thr	Thr	Pro	Leu	Asp	Val	Cys
				180				185					190		
Lys	Thr	Leu	Leu	Asn	Thr	Gln	Glu	Asn	Val	Ala	Leu	Ser	Leu	Ala	Asn
		195				200						205			
Ile	Ser	Gly	Arg	Leu	Ser	Gly	Met	Ala	Asn	Ala	Phe	Arg	Thr	Val	Tyr

```
<210> 5487
<211> 1716
<212> DNA
<213> Homo sapiens
```

4659

caaagaagca tagcttttag ctctaataat tctgtagcaa agccaataca aaaatcagct
 1080
 aaagctgccagaagaagc atcttcaaga tcacaaaaaa tagatcagaa aaaaagtcca
 1140
 tatggactgt ggatacctat ctaaaagaag aaaactgatg gctaagtttg catgaaaact
 1200
 gcactttatt gcaagttagt gtttctagca ttatcccatc cctttgagcc attcaggggt
 1260
 acttgtgcat ttaaaaacca acacaaaaag atgtaaatac ttaacactca aatattaaca
 1320
 ttttaggttt ctcttgacaga tatgagagat agcacagatg gaccaaaggt tatgcacagg
 1380
 tgggagtctt ttgtatatag ttgtaaatat tgtcttggtt atgtaaaaat gaaatttttt
 1440
 agacacagta attgaactgt attcctgttt tgtatatatta ataaatttct tgttttcatt
 1500
 cttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaga
 1549

<210> 5486

<211> 290

<212> PRT

<213> Homo sapiens

<400> 5486

Met	Ser	Asn	Tyr	Val	Asn	Asp	Met	Trp	Pro	Gly	Ser	Pro	Gln	Glu	Lys
1				5					10					15	
Asp	Ser	Pro	Ser	Thr	Ser	Arg	Ser	Gly	Gly	Ser	Ser	Arg	Leu	Ser	Ser
			20					25					30		
Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Ser	Arg	Ser	His	Ser	Arg
			35				40					45			
Val	Ser	Ser	Arg	Phe	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Lys	Ser	Arg	Ser
	50				55					60					
Arg	Ser	Arg	Arg	Arg	His	Gln	Arg	Lys	Tyr	Arg	Arg	Tyr	Ser	Arg	Ser
65					70					75				80	
Tyr	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Tyr	Arg	Glu	Arg
			85					90						95	
Arg	Tyr	Gly	Phe	Thr	Arg	Arg	Tyr	Tyr	Arg	Ser	Pro	Ser	Arg	Tyr	Arg
			100					105					110		
Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Ser	Tyr	Cys	Gly
			115				120					125			
Arg	Ala	Tyr	Ala	Ile	Ala	Arg	Gly	Gln	Arg	Tyr	Tyr	Gly	Phe	Gly	Arg
	130					135						140			
Thr	Val	Tyr	Pro	Glu	Glu	His	Ser	Arg	Trp	Arg	Asp	Arg	Ser	Arg	Thr
145					150					155				160	
Arg	Ser	Arg	Ser	Arg	Thr	Pro	Phe	Arg	Leu	Ser	Glu	Lys	Asp	Arg	Met
			165					170					175		
Glu	Leu	Leu	Glu	Ile	Ala	Lys	Thr	Asn	Ala	Ala	Lys	Ala	Leu	Gly	Thr
			180				185						190		
Thr	Asn	Ile	Asp	Leu	Pro	Ala	Ser	Leu	Arg	Thr	Val	Pro	Ser	Ala	Lys
			195				200					205			
Glu	Thr	Ser	Arg	Gly	Ile	Gly	Val	Ser	Ser	Asn	Gly	Ala	Lys	Pro	Glu
	210					215					220				
Leu	Ser	Glu	Lys	Val	Thr	Glu	Asp	Gly	Thr	Arg	Asn	Pro	Asn	Glu	Lys

260 265 270
 Gln Lys Ile Leu Gln Glu Glu Leu Cys Leu Ser Val Ile Thr Leu Phe
 275 280 285
 Pro Gly Ala Pro Val Val Leu Val Leu Cys Lys Asn Gly Asp Asp Arg
 290 295 300
 Gln Gln Trp Thr Lys Thr Gly Ser His Ile Glu His Ile Ala Ser His
 305 310 315 320
 Leu Cys Leu Asp Thr Asp Met Phe Gly Asp Gly Thr Glu Asn Gly Lys
 325 330 335
 Glu Ile Val Val Asn Pro Cys Glu Ser Ser Leu Met Ser Gln His Trp
 340 345 350
 Asp Met Val Ser Ser
 355

<210> 5485

<211> 1549

<212> DNA

<213> Homo sapiens

<400> 5485

nacgcgtgaa gggcggtacgc gatcgcgcg ggacagcgct actgcggctt tggtcgcaca
 60
 gtgtaccggt aggagcacag cagatggagg gacagctcca ggacgaggtt gtggaattcg
 120
 ccgttcgaaa gcagggacta aaagccccac ttcgtcttac gttccgaaag gaaggcgtct
 180
 gttgagcctt tctctcagtc gtgaggagg cgctcgacggc gtgcggaagt cctgagttga
 240
 ggcttcggtg atcctttccg gagaaagcgc aggcctaaagc cgcagggtgaa gatgtccaac
 300
 tacgtgaacg acatgtggcc gggctcgccg caggagaagg attcgccctc gacctcgcg
 360
 tcgggcggtt ccagccggtt gtcgtcgcg tctaggagcc gctctttttc cagaagctct
 420
 cggtccatt cccgcgtctc gagccggttt tcgtccagga gtcggaggag caagtccagg
 480
 tcccgttccc gaaggcgcca ccagcggaag tacaggcgct actcgcggtc atactcgcg
 540
 agccggtcgc gatccgcgag ccgccgttac cgagagaggc gctacgggtt caccaggaga
 600
 tactaccggt ctcttcgcg gtaccggtcc cggtcccgta gcaggtcgcg ctctcgggga
 660
 aggtcgtact gcggaagggt gtacgcgac gcgcggggac agcgtacta cggctttggt
 720
 cgcacagtgt acccgaggga gcacagcaga tggagggaca gatccaggac gaggtcgcg
 780
 agcagaacct cctttcgctt aagtgaataa gatcgaatgg agctgttaga aatagcaaaa
 840
 accaatgcag cgaaagctct aggaacaacc aacattgact tgccagctag tctcagaact
 900
 gttccttcag ccaaagaaac aagccgtgga ataggtgtat caagtaatgg tgcaaagcct
 960
 gaactgtcgg aaaaggtaac agaagatgga actcgaaatc ccaatgaaaa acctaccag
 1020

tgggcagcaa gcagcctgca accacctcag acatcctgga ctgggaggtg gaggcagagc
 1200
 cccccaggac aggagcaact gtctcagggg ggacagagga aaacatcaca agccaatggg
 1260
 gctcaaagac aaatcccaca tgttctcaag gccgttaagt tccagtccctg gccagtcatt
 1320
 ccctgattgg tatctggaga cagaaacctt atgggaagtg tttattgttc cttttcctac
 1380
 aaaggaagca gtctctggag gccagaaaga aaagccttct ttttcactag gccaggacta
 1440
 cattgagaga tgaagaatgg aggttggttc caaaagaaat aaagagaaac ttagaagttg
 1500
 tctctggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1552

<210> 5484

<211> 357

<212> PRT

<213> Homo sapiens

<400> 5484

Thr	Phe	Leu	Asp	Ser	His	Cys	Glu	Val	Asn	Arg	Asp	Trp	Leu	Gln	Pro
1				5					10					15	
Leu	Xaa	Asp	Arg	Val	Lys	Glu	Asp	Tyr	Thr	Arg	Val	Val	Cys	Pro	Val
				20				25					30		
Ile	Asp	Ile	Ile	Asn	Leu	Asp	Thr	Phe	Thr	Tyr	Ile	Glu	Ser	Ala	Ser
				35				40					45		
Glu	Leu	Arg	Gly	Gly	Phe	Asp	Trp	Ser	Leu	His	Phe	Gln	Trp	Glu	Gln
				50				55				60			
Leu	Ser	Pro	Glu	Gln	Lys	Ala	Arg	Arg	Leu	Asp	Pro	Thr	Glu	Pro	Ile
65					70				75					80	
Arg	Thr	Pro	Ile	Ile	Ala	Gly	Gly	Leu	Phe	Val	Ile	Asp	Lys	Ala	Trp
				85				90						95	
Phe	Asp	Tyr	Leu	Gly	Lys	Tyr	Asp	Met	Asp	Met	Asp	Ile	Trp	Gly	Gly
				100				105					110		
Glu	Asn	Phe	Glu	Ile	Ser	Phe	Arg	Val	Trp	Met	Cys	Gly	Gly	Ser	Leu
				115				120					125		
Glu	Ile	Val	Pro	Cys	Ser	Arg	Val	Gly	His	Val	Phe	Arg	Lys	Lys	His
				130				135					140		
Pro	Tyr	Val	Phe	Pro	Asp	Gly	Asn	Ala	Asn	Thr	Tyr	Ile	Lys	Asn	Thr
145					150				155					160	
Lys	Arg	Thr	Ala	Glu	Val	Trp	Met	Asp	Glu	Tyr	Lys	Gln	Tyr	Tyr	Tyr
				165					170					175	
Ala	Ala	Arg	Pro	Phe	Ala	Leu	Glu	Arg	Pro	Phe	Gly	Asn	Val	Glu	Ser
				180				185					190		
Arg	Leu	Asp	Leu	Arg	Lys	Asn	Leu	Arg	Cys	Gln	Ser	Phe	Lys	Trp	Tyr
				195				200					205		
Leu	Glu	Asn	Ile	Tyr	Pro	Glu	Leu	Ser	Ile	Pro	Lys	Glu	Phe	Ser	Ile
				210				215					220		
Gln	Lys	Gly	Asn	Ile	Arg	Gln	Arg	Gln	Lys	Cys	Leu	Glu	Ser	Gln	Arg
225					230					235				240	
Gln	Asn	Asn	Gln	Glu	Thr	Pro	Asn	Leu	Lys	Leu	Ser	Pro	Cys	Ala	Lys
				245				250						255	
Val	Lys	Gly	Glu	Asp	Ala	Lys	Ser	Gln	Val	Trp	Ala	Phe	Thr	Tyr	Thr

	115		120		125	
Asn	Tyr	Glu	Ser	Ala	Pro	Pro
					Ser	Pro
					Gln	Tyr
					Lys	Lys
					Ile	Ile
					Cys	
	130		135		140	
Met	Gly	Ala	Lys	Glu	Asn	Gly
					Leu	Pro
					Leu	Glu
					Tyr	Gln
					Glu	Lys
					Leu	
145			150		155	160
Lys	Ala	Ile	Glu	Pro	Asn	Asp
					Tyr	Thr
					Gly	Lys
					Val	Ser
					Glu	Glu
					Ile	
			165		170	175
Glu	Asp	Ile	Ile	Lys	Lys	Gly
					Glu	Thr
					Gln	Thr
					Leu	
	180		185			

<210> 5483

<211> 1552

<212> DNA

<213> Homo sapiens

<400> 5483

```

actttcctcg acagccactg tgaggtgaac agggactggc tccagcctct nttngacagg
60
gtcaaagagg actacacgcg ggtggtgtgc cctgtgatcg atatcattaa cctggacacc
120
ttcacctaca tcgagtctgc ctccggagctc agaggggggt ttgactggag cctccacttc
180
cagtgggagc agctctcccc agagcagaag gctcggcgcc tggacccac ggagcccatc
240
aggactccta tcatagctgg agggctcttc gtgatcgaca aagcttggtt tgattacctg
300
gggaaatatg atatggacat ggacatctgg ggtggggaga actttgaaat ctcttccga
360
gtgtggatgt gcgggggcag cctagagatc gtcccctgca gccgagtggg gcacgtcttc
420
cggaagaagc acccctacgt tttccctgat ggaaatgcca acacgtatat aaagaacacc
480
aagcggacag ctgaagtgtg gatggatgaa tacaagcaat actattacgc tgcccggcca
540
ttcgccctgg agaggccctt cggaatggt gagagcagat tggacctgag gaagaatctg
600
cgctgccaga gcttcaagtg gtacctggag aatatctacc ctgaactcag catccccaag
660
gagttctcca tccagaaggg caatatccga cagagacaga agtgcctgga atctcaaagg
720
cagaacaacc aagaaacccc aaacctaag ttgagcccct gtgccaaggt caaaggcgaa
780
gatgcaaagt cccaggtatg ggccttcaca tacaccaga agatcctcca ggaggagctg
840
tgcctgtcag tcatcacctt gttccctggc gcccagtggt ttcttgctct ttgcaagaat
900
ggagatgacc gacagcaatg gacaaaaact ggttcccaca tcgagcacat agcatcccac
960
ctctgcctcg atacagatat gttcggatgat ggcaccgaga acggcaagga aatcgctcgtc
1020
aaccatgtg agtcctcact catgagccag cactgggaca tggtagctc ttgaggacc
1080
ctgccagaag cagcaagggc catgggggtg tgcttccctg gaccagaaca gactggaaac
1140

```


aaaagtggaa tgtatgttgt aatagaagtt aaagttgcaa ctcaagaagg aaaagaaata
 660
 acctgtcgaa gttatctgat gacaaattac gaaagtgtct ccccatcccc acagtataaa
 720
 aagattatatt gcatgggtgc aaaagaaaaat ggtttgccgc tggagtatca agagaagtta
 780
 aaagcaatag aaccaaata gaatacagga aaggtctcag aagaaattga agacatcatc
 840
 aaaaaggggg aaacacaaac tctttagaac ataacagaat atatctaagg gtattctatg
 900
 tgctaataata aaatattttt aacacttgag aacagggatc tgggggatct ccacgtttga
 960
 tccattttca gcagtgtctt gaaggagtat cttacttggg tgattccttg tttttagact
 1020
 ataaaaagaa actgggatag gagttagaca atttaaaagg ggtgtatgag ggcctgaaat
 1080
 atgtgacaaa tgaatgtgag tacccttctt gtgaacactg aaagctattc tcttgaattg
 1140
 atcttaagtg tctccttgct ctggtaaaag atagatttgt agctcacttg atgatgggtg
 1200
 tgggtgaattg ctctgctctg tctgagattt ttaaaaaatca gcttaatgag agtaatctgc
 1260
 agacaattga taataacatt ttgaaaattg gaaagatggg atactgtttt tagaggaata
 1320
 aacgtatttg tggtttaaaa aaaaaagagc aacttccttt gcactgtata cccttttgta
 1380
 ttattaggat tttatactat gtttatatgt tgcctattta ataaatcgct taaagttata
 1440
 tatcttgaat atctttccat aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1500
 aaaaaaaaaa aaa
 1513

<210> 5482

<211> 188

<212> PRT

<213> Homo sapiens

<400> 5482

Met	Ala	Asn	Ser	Gly	Cys	Lys	Asp	Val	Thr	Gly	Pro	Asp	Glu	Glu	Ser
1				5				10					15		
Phe	Leu	Tyr	Phe	Ala	Tyr	Gly	Ser	Asn	Leu	Leu	Thr	Glu	Arg	Ile	His
			20					25					30		
Leu	Arg	Asn	Pro	Ser	Ala	Ala	Phe	Phe	Cys	Val	Ala	Arg	Leu	Gln	Asp
		35					40					45			
Phe	Lys	Leu	Asp	Phe	Gly	Asn	Ser	Gln	Gly	Lys	Thr	Ser	Gln	Thr	Trp
	50					55					60				
His	Gly	Gly	Ile	Ala	Thr	Ile	Phe	Gln	Ser	Pro	Gly	Asp	Glu	Leu	Trp
65					70				75					80	
Gly	Val	Val	Trp	Lys	Met	Asn	Lys	Ser	Asn	Leu	Asn	Ser	Leu	Asp	Glu
				85					90					95	
Gln	Glu	Gly	Val	Lys	Ser	Gly	Met	Tyr	Val	Val	Ile	Glu	Val	Lys	Val
			100					105						110	
Ala	Thr	Gln	Glu	Gly	Lys	Glu	Ile	Thr	Cys	Arg	Ser	Tyr	Leu	Met	Thr

35 40 45
 Glu Ala Glu Ala Arg Ala Glu Arg Glu Ala Glu Ala Arg Arg Arg Glu
 50 55 60
 Glu Gln Glu Ala Arg Glu Lys Ala Gln Ala Glu Gln Glu Glu Gln Glu
 65 70 75 80
 Arg Leu Gln Lys Gln Lys Glu Glu Ala Glu Ala Arg Ser Arg Glu Glu
 85 90 95
 Ala Glu Arg Gln Arg Leu Glu Arg Glu Lys His Phe Gln Gln Gln Glu
 100 105 110
 Gln Glu Arg Gln Glu Arg Arg Lys Arg Leu Glu Glu Ile Met Lys Arg
 115 120 125
 Thr Arg Lys Ser Glu Val Ser Glu Thr Lys Gln Lys Gln Asp Ser Lys
 130 135 140
 Glu Ala Asn Ala Asn Gly Ser Ser Pro Glu Pro Val Lys Ala Val Glu
 145 150 155 160
 Ala Arg Ser Pro Gly Leu Gln Lys Glu Ala Val Gln Lys Glu Glu Pro
 165 170 175
 Ile Pro Gln Glu Pro Gln Trp Ser Leu Pro Ser Lys Glu Leu Pro Ala
 180 185 190
 Ser Leu Val Asn Gly Leu Gln Pro Leu Pro Ala His Gln Glu Asn Gly
 195 200 205
 Phe Ser Thr Asn Gly Pro Ser Gly Asp Lys Ser Leu Ser Arg Thr Pro
 210 215 220
 Glu Thr Leu Leu Pro Phe Ala Glu Ala Glu Ala Phe Leu Lys Lys Ala
 225 230 235 240
 Val Val Gln Ser Pro Gln Val Thr Glu Val Leu
 245 250

<210> 5481
 <211> 1513
 <212> DNA
 <213> Homo sapiens

<400> 5481
 tgtccaatga ggagccagcg ccggattgct tcaggacaga ctatttctga gtctcggcgg
 60
 aaggcggagg gaaggccgtg gggatggcca atcaaagggg gcgactcagg tcggtgggga
 120
 ccggcagcca atcaggagag cgctcgctcc tgactcgacc ggcccacgct tcccgccagt
 180
 cccctaaccg tgaggctgcc gcgcggcggg cactgcgccg gggtagtggg cccagtggt
 240
 gcgctctctg gccgttcctt acactttgct tcaggctcca gtgcaggggc gtagtgggat
 300
 atggccaact cgggctgcaa ggacgtcacg ggtccagatg aggagagttt tctgtacttt
 360
 gcctacggca gcaacctgct gacagagagg atccacctcc gaaacccctc ggcggcgcttc
 420
 ttctgtgtgg cccgcctgca ggattttaag cttgactttg gcaattccca aggcaaaaca
 480
 agtcaaactt ggcattggagg gatagccacc atttttcaga gtcctggcga tgaattgtgg
 540
 ggagtagtat ggaaaatgaa caaaagcaat ttaaattctc tggatgagca agaagggggt
 600

cggaggcggg aggagcagga ggcacgagag aaggcgcagg ccgagcagga ggagcaggag
 240
 cggctgcaga agcagaaaga ggaggccgaa gctcggtcgc gggaagaggc ggagcggcag
 300
 cgtctggagc gggaaaagca cttccagcag caggagcaag agcggcaaga ggcagaaaag
 360
 cgtctggagg agatcatgaa gaggactcgg aagtcagaag tttctgaaac caagcagaag
 420
 caggacagca aggaggccaa cgccaacggt tccagcccag agcctgtgaa agctgtggag
 480
 gctcgggtccc cagggtgca gaaggaggct gtgcagaaag aggagcccat cccacaggag
 540
 cctcagtgga gtctcccaag caaggagttg ccagcgtccc tggatgaatgg cctgcagcct
 600
 ctcccagcac accaggagaa tggcttctcc accaacggac cctctgggga caagagtctg
 660
 agccgaacac cagagacact cctgcccttt gcagaggcag aagccttcct caagaaagct
 720
 gtggtgcagt ccccgaggt cacagaagtc ctttaagagg gtttgccttg gatccgggca
 780
 cagttgtgag ggctcctctg catcacctac caggatgtct ggaggagaaa aagacagaac
 840
 aaagatggaa gtggcctggg cccctggggg tgggtcctct ctgttgtttt taatctgcac
 900
 cttatagact gatgtctctt tggccggagc cagatctgcc cctcagtgca ttcgtgtgct
 960
 cgcacgcgca gacatccctt ctccccata cacacatata cactcacagc ctctctggcc
 1020
 tcttcccttg gggagggggc acctgtagta ttgcttga tttggtggg tacagtggat
 1080
 gtgaatactg taaatagctt gtgctcagac tcctctgcgt ggagagggg ggtgcaggag
 1140
 gcagaccctc ccccaaagc cccctgggga gatcttctc tctctattta actgtaactg
 1200
 aggggatcc caggctcggg gatgggggac acctggggc acaggatact ggttgcttca
 1260
 ggggtacca tgccccctgc cctcgctgg aatcagtgtt actgcatctg attaaatgtc
 1320
 tccagaaata aagaataatt ctgccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1380
 aaaaaa
 1386

<210> 5480

<211> 251

<212> PRT

<213> Homo sapiens

<400> 5480

Ala	Gly	Thr	Thr	Asp	Arg	Glu	Glu	Ala	Thr	Arg	Leu	Leu	Ala	Glu	Lys
1				5				10						15	
Arg	Arg	Gln	Ala	Arg	Glu	Gln	Arg	Glu	Arg	Glu	Glu	Gln	Glu	Arg	Arg
			20				25					30			
Leu	Gln	Ala	Glu	Arg	Asp	Lys	Arg	Met	Arg	Glu	Glu	Gln	Leu	Ala	Arg

gggccccccc gcccatgggg ttgggctggg ccttatagtg cctacgttag tctgtgtgga
 240
 gcccttgccc agcgggggag aaaaaggtgg cttctgtgcc gtctgtataa aacatggccc
 300
 ctcacctgtc ggccccccac acagctggca ggctgggctg gcctctcacc cctggcctcc
 360
 cctggacccc tggctggctc ctcaacttca ctctccgcac ttagtgcccc gccgccccca
 420
 gactcatcgt cgctcagccc ataggggaagc ccaggcctgg cccccagaga gtctccttcc
 480
 gagtctctct cgaagcccat gagctgggtca ctgttgccgt cgccttcctc ctcttcctct
 540
 tcctcctcaa actccagatc ctggcctagt agcaaatcac tctccaatac cagggccccg
 600
 ggtccttcgt cgaggagtc ttcagtatcc actttgaccc cctcgatttt cacgggctgc
 660
 ggggtggcttt gcttccttcg gggcatcgtg accggctcca gcccgacgcg cctccggcct
 720
 gcggccg
 727

<210> 5478

<211> 99

<212> PRT

<213> Homo sapiens

<400> 5478

Ser	Ala	Ser	Val	Lys	Ala	Arg	Ser	Pro	Gly	Pro	Tyr	Gly	Pro	Pro	Arg
1				5					10					15	
Pro	Trp	Gly	Trp	Ala	Gly	Pro	Tyr	Ser	Ala	Tyr	Val	Ser	Leu	Cys	Gly
			20					25					30		
Ala	Pro	Gly	Gln	Arg	Gly	Arg	Lys	Arg	Trp	Leu	Leu	Val	Arg	Leu	Tyr
			35				40					45			
Lys	Thr	Trp	Pro	Leu	Thr	Cys	Arg	Pro	Pro	Thr	Gln	Leu	Ala	Gly	Trp
	50					55					60				
Ala	Gly	Leu	Ser	Pro	Leu	Ala	Ser	Pro	Gly	Pro	Leu	Ala	Gly	Ser	Ser
65					70					75				80	
Thr	Ser	Leu	Ser	Ala	Leu	Ser	Ala	Arg	Pro	Pro	Pro	Asp	Ser	Ser	Ser
				85					90					95	

Leu Ser Pro

<210> 5479

<211> 1386

<212> DNA

<213> Homo sapiens

<400> 5479

gccggcacca cagaccgaga agaagccact cggctcttgg ctgagaagcg gcgccaggcc
 60
 cgggagcagc gggagcgcga ggagcaggag cggaggctgc aggcagaaag ggacaagcga
 120
 atgcgagagg agcagctggc acgggaggcc gagggccggg cggagcggga ggcggaggcc
 180

cctgagaaga aagcagcggg cggggcgcca cggagggggcc ctctgggggg acggaaaaaa
 540
 aagaaggcgc cgtcagcctc cgactccgac tccaaggccg attcggacgg ggccaagcct
 600
 gagccggtgg ccatggcgcg gtcggcgt
 628

<210> 5476

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5476

Gly	Thr	His	Glu	Thr	Ala	Phe	Leu	Gly	Pro	Lys	Asp	Leu	Phe	Pro	Tyr
1			5					10					15		
Asp	Lys	Cys	Lys	Asp	Lys	Tyr	Gly	Lys	Pro	Asn	Lys	Arg	Lys	Gly	Phe
	20						25					30			
Asn	Glu	Gly	Leu	Trp	Glu	Ile	Gln	Asn	Pro	His	Ala	Ser	Tyr	Ser	
	35				40					45					
Ala	Pro	Pro	Pro	Val	Ser	Ser	Ser	Asp	Ser	Glu	Ala	Pro	Glu	Ala	Asn
	50				55					60					
Pro	Ala	Asp	Gly	Ser	Asp	Ala	Asp	Glu	Asp	Asp	Glu	Asp	Arg	Gly	Val
65				70				75						80	
Met	Ala	Val	Thr	Ala	Val	Thr	Ala	Thr	Ala	Ala	Ser	Asp	Arg	Met	Glu
			85				90						95		
Ser	Asp	Ser	Asp	Ser	Asp	Lys	Ser	Ser	Asp	Asn	Ser	Gly	Leu	Lys	Arg
	100						105						110		
Lys	Thr	Pro	Ala	Leu	Lys	Met	Ser	Val	Ser	Lys	Arg	Ala	Arg	Lys	Ala
	115					120						125			
Ser	Ser	Asp	Leu	Asp	Gln	Ala	Ser	Val	Ser	Pro	Ser	Glu	Glu	Glu	Asn
	130				135					140					
Ser	Glu	Ser	Ser	Ser	Glu	Ser	Glu	Lys	Thr	Ser	Asp	Gln	Asp	Phe	Thr
145				150				155						160	
Pro	Glu	Lys	Lys	Ala	Ala	Val	Arg	Ala	Pro	Arg	Arg	Gly	Pro	Leu	Gly
			165					170					175		
Gly	Arg	Lys	Lys	Lys	Lys	Ala	Pro	Ser	Ala	Ser	Asp	Ser	Asp	Ser	Lys
		180					185					190			
Ala	Asp	Ser	Asp	Gly	Ala	Lys	Pro	Glu	Pro	Val	Ala	Met	Ala	Arg	Ser
	195					200					205				

Ala

<210> 5477

<211> 727

<212> DNA

<213> Homo sapiens

<400> 5477

ttttttgtta gtgtttcctt tattataaag cactgaaata agttaaataa acagggtggga
 60
 ggctgggcag tccccagcc gggtttgtcca cagcccctgg gggcagtgga ggtgaataca
 120
 gggcccttct cactgagctc gtgaagtgcc tcagtcaagg caagggtccc tggccatat
 180

ttttgatcac gacctcttta gctttgcaga tttgatcttt gggaagtggc ctgtggttct
 600
 tatcaccaat cctaaatcac tcctttatag ttgtggtgaa catgaaccac tagaaagact
 660
 tcttcactca acccacatta gattggtaac a
 691

<210> 5474

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5474

Met	Lys	Lys	Met	Glu	Glu	Leu	Leu	Leu	Leu	Ala	Lys	Glu	Ser	Ser	Arg
1				5						10				15	
Ser	Asn	His	Thr	Ile	Trp	Phe	Gly	His	Phe	Thr	Thr	Ser	Thr	Ile	Leu
			20					25					30		
Ser	Pro	Ser	Pro	Gly	Ile	Arg	Ser	Ile	Met	Ser	Ser	Ala	Ile	Ala	Tyr
		35					40					45			
Leu	Cys	Gly	His	Leu	His	Thr	Leu	Gly	Gly	Leu	Met	Pro	Val	Leu	His
	50					55					60				
Thr	Arg	His	Phe	Gln	Gly	Thr	Leu	Glu	Leu	Glu	Val	Gly	Asp	Trp	Lys
65					70					75				80	
Asp	Asn	Arg	Arg	Tyr	Arg	Ile	Phe	Ala	Phe	Asp	His	Asp	Leu	Phe	Ser
				85					90					95	
Phe	Ala	Asp	Leu	Ile	Phe	Gly	Lys	Trp	Pro	Val	Val	Leu	Ile	Thr	Asn
			100					105					110		
Pro	Lys	Ser	Leu	Leu	Tyr	Ser	Cys	Gly	Glu	His	Glu	Pro	Leu	Glu	Arg
		115					120					125			
Leu	Leu	His	Ser	Thr	His	Ile	Arg	Leu	Val	Thr					
		130					135								

<210> 5475

<211> 628

<212> DNA

<213> Homo sapiens

<400> 5475

ggcacacacg aaacagcctt cctgggaccc aaggacctgt tcccctacga caaatgtaaa
 60
 gacaagtacg ggaagcccaa caagaggaaa ggcttcaatg aagggtgtg ggagatccag
 120
 aacaaccccc acgccagcta cagcgcctt ccgccagtga gctcctccga cagcgaggcc
 180
 cccgaggcca accccgccga cggcagtga gctgacgagg acgatgagga ccgggggggtc
 240
 atggccgtca cagcggtaac cgccacagct gccagcgaca ggatggagag cgactcagac
 300
 tcagacaaga gtagcgacaa cagtggcctg aagaggaaga cgctgcgct aaagatgtcg
 360
 gtctcgaaac gagcccga ggcctccagc gacctggatc aggccagcgt gtcccatcc
 420
 gaagaggaga actcggaaag ctcatctgag tcggagaaga ccagcgacca ggacttcaca
 480

<210> 5472
 <211> 161
 <212> PRT
 <213> Homo sapiens

<400> 5472
 Met Leu Cys Gly Ser Arg His Thr Arg Val Thr His Thr Gln Pro Cys
 1 5 10 15
 Pro Arg Leu Pro Pro His Pro His Pro Asp Lys Arg Thr Leu Trp Ser
 20 25 30
 Pro Ser Ala His Leu Leu Gly Leu His Thr Gln Arg His Ala Asp Gly
 35 40 45
 Phe Leu Cys Leu Cys Thr His Ala Gly Ala Gly Gly Ser Val His Thr
 50 55 60
 Pro Pro Arg Leu Arg Ala Arg Pro Tyr Met Pro Cys Ala Pro Thr Gln
 65 70 75 80
 Ala Gly Leu Gly Ser Leu His Ser Pro Leu Arg Val His Ser His Ile
 85 90 95
 Ala Thr His Ser Cys Pro His Lys Leu Val Ser Leu Tyr Ser Ala His
 100 105 110
 Gly His Thr Cys Ala Pro His Leu Ala Thr Arg Thr Pro Gly Leu Cys
 115 120 125
 Ile Pro His Pro Gly Ser Gly Pro Arg Val Val Gly Pro Ala Gly Ser
 130 135 140
 Ala Ala Ala Ser Ala Arg Thr Val Leu Phe Leu Arg Pro Arg Gly Ala
 145 150 155 160
 Ala

<210> 5473
 <211> 691
 <212> DNA
 <213> Homo sapiens

<400> 5473
 gcgaccagca gcgctggtgg ccatgctctt ggacactacg gcctggcggg cagccctcgc
 60
 cgctgccgcg ccccgcgccc ccaggaggcc gcaccctgcg ccaggggccg gagacagcaa
 120
 catcttcttg ggctgcagg agacctgaca gatgccaaaa caaaggaaca gttgggatcc
 180
 aggcagcatg aggtagaatg gcaaacctac cagggtattc tgaagaagac aagagtcattg
 240
 gaaaaaacca agtggctgga tatcaaagga aatcatgaaa aagatggagg agctcttatt
 300
 actggccaag gaaagcagtc ggagcaacca tacaatttgg tttggacact ttacaacatc
 360
 cactattctt tctccatcac caggaatccg gtcaataatg agttcggcta tagcttattt
 420
 gtgtggacat ctccatacac ttggtggact gatgcctggt ttgcacactc gtcacttcca
 480
 gggcactttg gaacttgagg tgggagactg gaaggataat aggaggtacc ggatttttgc
 540

195 200 205
 Asp Ala Leu Lys Gln Arg Ala Glu Gln Ser Ile Ser Glu Glu Pro Gly
 210 215 220
 Trp Glu Glu Glu Glu Glu Leu Met Gly Ile Ser Pro Ile Ser Pro
 225 230 235 240
 Lys Glu Ala Lys Val Pro Val Ala Lys Ile Ser Thr Phe Pro Glu Gly
 245 250 255
 Glu Pro Gly Pro Gln Ser Pro Cys Glu Glu Asn Leu Val Thr Ser Val
 260 265 270
 Glu Pro Pro Ala Glu Val Thr Pro Ser Glu Ser Ser Glu Ser Ile Ser
 275 280 285
 Leu Val Thr Gln Ile Ala Asn Pro Ala Thr Ala Pro Glu Ala Arg Val
 290 295 300
 Leu Pro Lys Asp Leu Ser Gln Lys Leu Leu Glu Ala Ser Leu Glu Glu
 305 310 315 320
 Gln Gly Leu Ala Val Asp Val Gly Glu Thr Gly Pro Ser Pro Ile
 325 330 335
 His Ser Lys Pro Leu Thr Pro Ala Gly His Thr Gly Gly Pro Glu Pro
 340 345 350
 Arg Pro Pro Ala Arg Val Glu Thr Leu Arg Glu Glu Ala Pro Thr Asp
 355 360 365
 Leu Arg Val Phe Glu Leu Asn Ser Asp Ser Gly Lys Ser Thr Pro Ser
 370 375 380
 Asn Asn Gly Lys Lys Gly Ser Ser Thr Asp Ile Ser Glu Asp Trp Glu
 385 390 395 400
 Lys Asp Phe Asp Leu Asp Met Thr Glu Glu Glu Val Gln Met Ala Leu
 405 410 415
 Ser Lys Val Asp Ala Ser Gly Glu Leu Lys Met
 420 425

<210> 5471

<211> 534

<212> DNA

<213> Homo sapiens

<400> 5471

cggccgcccc gcggggcgcg agaaatagga ccgtcctggc agaggctgca gccgacccag
 60
 ctggccccac tacgcggggc ccagagccag ggtgggggat gcagagaccg ggcgtgcggg
 120
 ttgccagggtg tggcgccat gtgtgcccgt gggcagagta cagagacaca agcttgtgtg
 180
 gacacgaatg tgtagctatg tgcgagtgc caccgagtg tgagtgcagg gacccaggc
 240
 cggcctgcgt cgggtgcgcag ggcataatagg ggcgtgcacg cagtcttgga ggtgtgtgca
 300
 cagagccccc ggcacccgcg tgtgtgcaaa gacacaggaa cccgtctgcg tggcgctgtg
 360
 tgtgcaaccc aaggaggtgg gcgcttgga tccaaagtgt gcgcttatcc ggatgtggat
 420
 gtgggggcag ccggggacag ggctgggtgt gcgtgactcg ggtgtgccgg gacccacaga
 480
 gcataatgtt ccatgcctgg tgctgtgact catgtccctg ggggtgggcac gcgt
 534

gaagagcccg gctgggagga ggaggaagag gagctcatgg gcatttcacc catatctcca
 720
 aaagaggcaa aggttcctgt ggccaaaatt tctacattcc ctgaaggaga acctggcccc
 780
 cagagcccct gtgaagagaa tctggtgact tcagttgagc cccagcaga ggtgactcca
 840
 tcagagagca gtgagagcat ctccctcgtg acacagatcg ccaaccggc cactgcacct
 900
 gaggcacgag tgctacccaa ggacctgtcc caaaagctgc tagaggcatc cttggaggaa
 960
 cagggcctgg ctgtggatgt ggggtgagact ggacctcac cccctattca ctccaagccc
 1020
 ctaacgcctg ctggccacac cggcggccca gagcccaggc ctccagccag agtagagact
 1080
 ctgagggagg aggcgcccac agacttacgg gtgtttgagc tgaactcgga tagtgggaag
 1140
 tctacaccct ccaacaatgg aaagaaaggc tcaagcacgg acatcagtga ggactgggag
 1200
 aaagactttg acttggacat gactgaagag gaggtgcaga tggcactttc caaagtggat
 1260
 gcctccgggg agctgaagat gtagaggggg aa
 1292

<210> 5470

<211> 427

<212> PRT

<213> Homo sapiens

<400> 5470

Xaa	Ala	Ala	Ala	Ser	Thr	Glu	Gly	Glu	Asp	Val	Gly	Trp	Trp	Arg	Ser
1				5					10					15	
Trp	Leu	Gln	Gln	Ser	Tyr	Gln	Ala	Val	Lys	Glu	Lys	Ser	Ser	Glu	Ala
		20						25					30		
Leu	Glu	Phe	Met	Lys	Arg	Asp	Leu	Thr	Glu	Phe	Thr	Gln	Val	Val	Gln
		35				40						45			
His	Asp	Thr	Ala	Cys	Thr	Ile	Ala	Ala	Thr	Ala	Ser	Val	Val	Lys	Glu
	50					55					60				
Lys	Leu	Ala	Thr	Glu	Gly	Ser	Ser	Gly	Ala	Thr	Glu	Lys	Met	Lys	Lys
65				70					75					80	
Gly	Leu	Ser	Asp	Phe	Leu	Gly	Val	Ile	Ser	Asp	Thr	Phe	Ala	Pro	Ser
			85					90						95	
Pro	Asp	Lys	Thr	Ile	Asp	Cys	Asp	Val	Ile	Thr	Leu	Met	Gly	Thr	Pro
		100						105					110		
Ser	Gly	Thr	Ala	Glu	Pro	Tyr	Asp	Gly	Thr	Lys	Ala	Arg	Leu	Tyr	Ser
		115					120					125			
Leu	Gln	Ser	Asp	Pro	Ala	Thr	Tyr	Cys	Asn	Glu	Pro	Asp	Gly	Pro	Pro
		130				135					140				
Glu	Leu	Phe	Asp	Ala	Trp	Leu	Ser	Gln	Phe	Cys	Leu	Glu	Glu	Lys	Lys
145				150					155					160	
Gly	Glu	Ile	Ser	Glu	Leu	Leu	Val	Gly	Ser	Pro	Ser	Ile	Arg	Ala	Leu
			165					170					175		
Tyr	Thr	Lys	Met	Val	Pro	Ala	Ala	Val	Ser	His	Ser	Glu	Phe	Trp	His
		180						185					190		
Arg	Tyr	Phe	Tyr	Lys	Val	His	Gln	Leu	Glu	Gln	Glu	Gln	Ala	Arg	Arg

```
<210> 5469
<211> 1292
<212> DNA
<213> Homo sapiens
```

```

<400> 5469
nncgcgggccg cgtcgacgga aggggaggac gtgggatggt ggcggagctg gctgcagcag
60
agctaccaag cagtcaaaga gaagtcctct gaagccttgg agtttatgaa gcgggacctg
120
acggagttta cccagggtggt gcagcatgac acggcctgta ccatcgcagc cacggccagc
180
gtggtcaagg agaagctggc tacggaaggc tcctcaggag caacagagaa gatgaagaaa
240
gggttatctg acttcctagg ggtgatctca gacacctttg ccccttcgcc agacaaaacc
300
atcgactgcg atgtcatcac cctgatgggc acaccgtctg gcacagctga gccctatgat
360
ggcaccaagg ctgcctcta tagcctgcag tcggaccag caacctactg taatgaacca
420
gatgggcccc cggaattggt tgacgcctgg ctttcccagt tctgcttgga ggagaagaag
480
ggggagatct cagagctcct tgtaggcagc ccctccatcc gggccctcta caccaagatg
540
gttccagcag ctgtttccca ttcagaattc tggcatcggt atttctataa agtccatcag
600
ttagagcagg agcaggcccc gagggacgcc ctgaagcagc gggcggaaca gagcatctct
660

```

ggagagatga ctcagctgcc agtgatcaaa gcagagcctc tggaggtgaa ccagttcctc
 660
 aaagtgcacac cggaggacct ggtgcagatg cctccgacgc cccccagcag ccatggcagt
 720
 gacagcgacg gctcccagag tccccgctct ctgccccctt ccagccctgt caggcccatg
 780
 gcgcgctcct ccacggccat ctccagctcc ccaactctca cggctcctca taaattacag
 840
 gggacatcag gccctctggt cctgacagag gaggagaaga ggaccctgat tgctgagggc
 900
 tatcccatcc ccaccaaact ccccctcacc aaatcagagg agaaggcctt gaagaaaatt
 960
 cggaggaaga tcaagaataa gattttctgct caggaaagta ggagaaagaa gaaagaatac
 1020
 atggacagcc tggagaaaaa agtggagtct tgttcaactg agaacttgga gcttcggaag
 1080
 aaggtagaga ccctggagaa tgccaacagc ttctccagcg ggatccagcc actcctctgt
 1140
 tccctgattg gcctggagaa tcccacctga cccccaccc caccctctg tctctggctg
 1200
 gggttccttt ctggcccaaa gtaggtccaa gccctttagt ttatttcgcc acctgctgta
 1260
 cattgtggga actgcaaccc ctacgtgccc gtttgggtgg agagagatta aacatttgcc
 1320
 caccaaaaa
 1329

<210> 5468

<211> 363

<212> PRT

<213> Homo sapiens

<400> 5468

Met	Asp	Ala	Val	Leu	Glu	Pro	Phe	Pro	Ala	Asp	Arg	Leu	Phe	Pro	Gly
1				5				10					15		
Ser	Ser	Phe	Leu	Asp	Leu	Gly	Asp	Leu	Asn	Glu	Ser	Asp	Phe	Leu	Asn
			20					25					30		
Asn	Ala	His	Phe	Pro	Glu	His	Leu	Asp	His	Phe	Thr	Glu	Asn	Met	Glu
			35				40					45			
Asp	Phe	Ser	Asn	Asp	Leu	Phe	Ser	Ser	Phe	Phe	Asp	Asp	Pro	Val	Leu
	50				55						60				
Asp	Glu	Lys	Ser	Pro	Leu	Leu	Asp	Met	Glu	Leu	Asp	Ser	Pro	Thr	Pro
65					70					75				80	
Gly	Ile	Gln	Ala	Glu	His	Ser	Tyr	Ser	Leu	Ser	Gly	Asp	Ser	Ala	Pro
			85						90					95	
Gln	Ser	Pro	Leu	Val	Pro	Ile	Lys	Met	Glu	Asp	Thr	Thr	Gln	Asp	Ala
			100					105					110		
Glu	His	Gly	Ala	Trp	Ala	Leu	Gly	His	Lys	Leu	Cys	Ser	Ile	Met	Val
		115					120					125			
Lys	Gln	Glu	Gln	Ser	Pro	Glu	Leu	Pro	Val	Asp	Pro	Leu	Ala	Ala	Pro
		130				135					140				
Ser	Ala	Met	Ala	Ala	Ala	Ala	Ala	Met	Ala	Thr	Thr	Pro	Leu	Leu	Gly
145					150					155				160	
Leu	Ser	Pro	Leu	Ser	Arg	Leu	Pro	Ile	Pro	His	Gln	Ala	Pro	Gly	Glu

gcagccacgc agtgcac
497

<210> 5466
<211> 134
<212> PRT
<213> Homo sapiens

<400> 5466
Met Ala Pro Pro Leu Gln Gly Pro Gly Gly Ala Ala Gly Gly Arg Thr
1 5 10 15
Asp Gly Gln Ala Ala Trp Val Ala Gly Pro Arg Lys Ala Gly Val Asp
20 25 30
Val Arg Asp Glu Pro Pro Ala Lys Pro Val Gly Met Ser Gly Pro Ser
35 40 45
Trp Trp Asp Cys Leu Gly His Arg His Gln His Gly Val Arg Ala Ile
50 55 60
Ser Gly Asp Ile Gly Gly Ala Thr Thr Arg Trp Gly Ile Phe Asn Arg
65 70 75 80
Leu Glu Pro Leu Arg Leu Glu Arg Pro Thr Pro Gly Arg Arg Pro Pro
85 90 95
Leu Thr Pro Leu Leu Pro Leu Leu Trp Asp Pro Pro Val Asp Thr Pro
100 105 110
Asp Glu Asp Thr Gln Glu Ala Ser Ser Gln Asp Arg Arg Gln Leu Pro
115 120 125
Gly Gln Pro Arg Ser Ala
130

<210> 5467
<211> 1329
<212> DNA
<213> Homo sapiens

<400> 5467
gtcgaatatc catgcagccg cgccgccgcc ctggagtgcg ggaagcccag tggaaggggg
60
tcccgggagc cggctgcgat ggacgccgtc ttggaaccct tcccggccga caggctgttc
120
cccggatcca gcttcctgga cttgggggat ctgaacgagt cggacttcct caacaatgcg
180
cactttcctg agcacctgga ccactttacg gagaacatgg aggacttctc caatgacctg
240
ttcagcagct tctttgatga ccctgtgctg gatgagaaga gccctctatt ggacatggaa
300
ctggactccc ctacgccagg catccaggcg gagcacagct actcctgag cggcgactca
360
gcgccccaga gccccttgt gcccatcaag atggaggaca ccaccaaga tgagagcat
420
ggagcatggg cgctgggaca caaactgtgc tccatcatgg tgaagcagga gcagagcccc
480
gagctgcccc tggacctct ggctgcccc tggccatgg ctgccgcggc cgccatggcc
540
accacccgcg tgctgggect cagccccttg tccaggctgc ccatcccca ccaggccccg
600

gtgaagcagc gcttgcatg gtacaactcg cagcaccggg cagcaatcag ctgcatccgg
 600
 acgggtgtgga ggaccgaggg gttggggggc ttctaccgga gctacaccac gcagctgacc
 660
 atgaacatcc ccttccagtc catccacttc atcacctatg agttcctgca ggagcaggtc
 720
 aacccccacc ggacctacaa cccgcagtcc cacatcatct caggcggggt ggccggggcc
 780
 ctcgccgcgg cc
 792

<210> 5464

<211> 111

<212> PRT

<213> Homo sapiens

<400> 5464

Phe	Ser	Gly	Val	Cys	Phe	Ala	Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu
1				5				10					15		
Leu	His	Asp	Ala	Val	Met	Asn	Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu
			20					25					30		
Gln	Met	Tyr	Asn	Ser	Gln	His	Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr
			35				40					45			
Val	Trp	Arg	Thr	Glu	Gly	Leu	Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr
	50					55				60					
Gln	Leu	Thr	Met	Asn	Ile	Pro	Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr
65					70					75				80	
Glu	Phe	Leu	Gln	Glu	Gln	Val	Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln
				85					90				95		
Ser	His	Ile	Ile	Ser	Gly	Gly	Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	
			100				105					110			

<210> 5465

<211> 497

<212> DNA

<213> Homo sapiens

<400> 5465

tttgacggtc ttcagggttta ttctttaaat caattaggaa ataaaaccac agtgcccagg
 60
 aaagtgcaca tgagacgcca cgggtgtctt tgccatggcc ccaccactcc aggggccagg
 120
 ggggtgctgct ggagggagga cagacggaca ggcggcctgg gtggccggcc ccagaaaggc
 180
 tggcgtggat gttcgagatg agccaccagc gaagccagta gggatgtctg ggccgtcctg
 240
 gtgggattgt ctgggacatc gccaccaaca cgggtgcaga gccatcagtg gggacatcgg
 300
 agggggccacc accaggtggg gtatatccaa caggctagaa cccctgaggc ttgagaggcc
 360
 aacccccggc aggagacctc cctgacccc tctgctgcct ctctgtggg accctccagt
 420
 agacacacca gatgaggaca cccaggaggc ctctcccag gacaggaggc agctgcctgg
 480

tgattgattc acctaataata aatatatttg tgccatgaac ctctt
1725

<210> 5462

<211> 159

<212> PRT

<213> Homo sapiens

<400> 5462

Met	Ser	Trp	Arg	Ile	Ser	Pro	Ala	Thr	Pro	Cys	Cys	Arg	Glu	Leu	Thr
1				5					10					15	
Phe	His	Leu	Cys	Ile	Phe	Cys	Leu	Glu	Thr	Ala	Tyr	Cys	Arg	Val	Gly
			20					25					30		
Leu	Gly	Ile	Cys	Tyr	Asp	Met	Arg	Phe	Ala	Glu	Leu	Ala	Gln	Ile	Tyr
		35					40					45			
Ala	Gln	Arg	Gly	Cys	Gln	Leu	Leu	Val	Tyr	Pro	Gly	Ala	Phe	Asn	Leu
	50					55					60				
Thr	Thr	Gly	Pro	Ala	His	Trp	Glu	Leu	Leu	Gln	Arg	Ser	Arg	Ala	Val
65					70					75				80	
Asp	Asn	Gln	Val	Tyr	Val	Ala	Thr	Ala	Ser	Pro	Ala	Arg	Asp	Asp	Lys
					85				90					95	
Ala	Ser	Tyr	Val	Ala	Trp	Gly	His	Ser	Thr	Val	Val	Asn	Pro	Trp	Gly
			100					105					110		
Glu	Val	Leu	Ala	Lys	Ala	Gly	Thr	Glu	Glu	Ala	Ile	Val	Tyr	Ser	Asp
		115					120					125			
Ile	Asp	Leu	Lys	Lys	Leu	Ala	Glu	Ile	Arg	Gln	Gln	Ile	Pro	Val	Phe
	130					135					140				
Arg	Gln	Lys	Arg	Ser	Asp	Leu	Tyr	Ala	Val	Glu	Met	Lys	Lys	Pro	
145					150					155					

<210> 5463

<211> 792

<212> DNA

<213> Homo sapiens

<400> 5463

nnntttttttt ttttttaaag cctggattgt aaccagattt tcttttttcc cccttctcag
60
ctgtagatat gatattcctt ttcagggccc cagcttaagg gcaaagtgag ttaatgtgta
120
gacaaaggcg agggacaaga gagagttaac atctagacag tggaaaaagc catggtgtgt
180
ggtttctggg aaccaccaac acttgcaggt ttagcttttt cccaggggtg actacaagaa
240
agaaaaccat gtttttgcaa gattaaaatg tggttgagtg tgcctaaatt aaccatcccc
300
atttttatca tatttccacc atcacttcag ggttttaaga gtcagtgtc acctgggchg
360
agctggtagt acattttgct tcttagaaag ctaagtcctg ggttccgtct gattttaggt
420
tccaggaact tcttgagaac acccgatcgc agagggtaat tttctggagt ttgttttgca
480
gggatagctg ggagtatggc caccctgctc cagcatgchg taatgaatcc agcagaagtg
540

catccagctt cagatttctt ccatcaaata agataacgtc actcgcgctt gtagcttcat
120
ccgggaggca gcaacgcaag gagccaaaat agtttctttg ccggaatgct ttaattctcc
180
atatggagcg aaatattttc ctgaatatgc agagaaaatt cctgggtgaat ccacacagaa
240
gctttctgaa gtagcaaagg aatgcagcat atatctcatt ggaggtaact tcctaccac
300
aaggctctat ccctgaagag gatgctggga aattatataa cacctgtgct gtgtttgggc
360
ctgatggaac tttagtagca aagtatagaa agatccatct gtttgacatt gatgttcctg
420
gaaaaattac atttcaagaa tctaaaacat tgagtccggg tgatagtctc tccacatttg
480
atactcgtat gtaccagata agtttgccctc tttagcaata tcagtagaag acaatcaggt
540
atattattct tttttgtctc tctccgattt cttcacataa cctaactgaa agaccataag
600
tgagaaaggc agagaatcat cacagatctg gaaagtccgg gcttatttga gaactaagga
660
tttgacacga ttttgccctt tgatttgatt gtagcttctt gttacggctt ccagagtata
720
cctattagc tacagttgag tacctcccat ctagataata agcattcaat tagaatgaat
780
ttctcatctt tactccgctg atgtaaatga tgtctttatg agatgaagtc caagtaggaa
840
tgagcttgta aattatctct gtccctcaggt cctgtgttaa tttatccctg tcagtgtttt
900
gtgatcatta tgtcatggag gatttccctt gccacacat gctgtaggga gtttaactttt
960
catttggtgca ttttctgttt ggaaacagct tactgcagag tgggtctggg catctgctac
1020
gacatgcggt ttgcagagct tgcacaaata tacgcacaga gaggctgcca gctgttggtg
1080
tatccaggag cttttaatct gacctgga ccagccattt gggagtact tcagcgaagc
1140
cgggctgttg ataatcaggt gtatgtggcc acagcctctc ctgcccggga tgacaaagcc
1200
tcctatgttg cctggggaca cagcacgtg gtgaaccctt ggggggaggt tctagccaaa
1260
gctggcacag aagaagcaat cgtgtattca gacatagacc tgaagaagct ggctgaaata
1320
cgccagcaaa tccccgtttt tagacagaag cgatcagacc tctatgctgt ggagatgaaa
1380
aagccctaaa gtttatgttt ctaatgtgtc acagaatagg acgatatgat tctacaacat
1440
aatcaactcc ctattaaatt ctttaatgaa gatttttttt ttaattcggc cttgtccttc
1500
ctaggttctc tattgagatg agaaagcctc attatgctga cattttccac gccacattaa
1560
atagttaaaa aggatgcagc ctggagccag agagcagaaa gctgggctgg ttctgaagct
1620
tcttccatac ttaagttgcc tccaagcagt ttgtgaaagt atcagatcct ggtatccctg
1680

tggacagctt ctttgagact atttaaaac tggatacaaca ggtctctaca acgccaagat
 1020
 ctaactaagc tttaaaaggt caagaagttt tatggctgac aaaggactcg cgcaacgcag
 1080
 aaggcctttc ccaccttaag cttccgggga tctgggaatt ttaccccat tctcttctgt
 1140
 ttgtctgagt ctcattcttc tgcaagcaag ggctgaaatc attttgtttg ggatagctgg
 1200
 gagtatggcc accctgctcc acgatgcggt aatgaatcca gcagaaggta atgtttcatg
 1260
 gtcccagga ggggcagtag gggatgtgca aaggggcaca aaaaaatggg tgtgggagag
 1320
 tggagaggac tgaaggtggg cagacggctc ctagtctcca gtcagagcag acaggagaat
 1380
 tgaatttttt actacgttat caaaggcctc aagaaaggac gtgaacataa gagtttttgg
 1440
 tattcctgtg ctccgagcta cttcaaag
 1468

<210> 5460

<211> 155

<212> PRT

<213> Homo sapiens

<400> 5460

Met	Glu	Leu	Arg	Ser	Gly	Ser	Val	Gly	Ser	Gln	Ala	Val	Ala	Arg	Arg
1				5					10					15	
Met	Asp	Gly	Asp	Ser	Arg	Asp	Gly	Gly	Gly	Lys	Asp	Ala	Thr	Gly	
			20				25					30			
Ser	Glu	Asp	Tyr	Glu	Asn	Leu	Pro	Thr	Ser	Ala	Ser	Val	Ser	Thr	His
		35				40						45			
Met	Thr	Ala	Gly	Ala	Met	Ala	Gly	Ile	Leu	Glu	His	Ser	Val	Met	Tyr
	50					55					60				
Pro	Val	Asp	Ser	Val	Lys	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro
65					70				75					80	
Lys	Ala	Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Gln
			85					90						95	
Thr	Glu	Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met
		100					105						110		
Gly	Ala	Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met
		115					120					125			
Lys	Arg	Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu
	130					135						140			
Ala	Asn	Gly	Ile	Leu	Lys	Ala	Phe	Val	Trp	Ser					
145					150					155					

<210> 5461

<211> 1725

<212> DNA

<213> Homo sapiens

<400> 5461

nnagtcgcg ccgcaggtgg tgcttgctc cagagtcacg acctctttcc gcttggccct
 60

<213> Homo sapiens

<400> 5458

```

Arg Ser Gly Ser Val Gly Ser Gln Ala Val Ala Arg Arg Met Asp Gly
 1             5             10             15
Asp Ser Arg Asp Gly Gly Gly Gly Lys Asp Ala Thr Gly Ser Glu Asp
      20             25             30
Tyr Glu Asn Leu Pro Thr Ser Ala Ser Val Ser Thr His Met Thr Ala
      35             40             45
Gly Ala Met Ala Gly Ile Leu Glu His Ser Val Met Tyr Pro Val Asp
      50             55             60
Ser Val Lys Val Met Trp Thr Val Glu Leu Cys Ala Gly His Phe Gln
65             70             75             80
Pro

```

<210> 5459

<211> 1468

<212> DNA

<213> Homo sapiens

<400> 5459

```

nncgccatgg cgtcaggcgc cgcgggccccg gggagggtggc tcccacttta agaagtgaag
60
ttttgcgccc ctccccctcc ctgcccacct cctgcagcct cctgcgcccc gccgagctgg
120
cggatggagc tgcgcgagcgg gagcgtgggc agccaggcgg tggcgcgagg gatggatggg
180
gacagccgag atggcgggcgg cggcaaggac gccaccgggt cggaggacta cgagaacctg
240
ccgactagcg cctccgtgtc caccacatg acagcaggag cgatggccgg gatcctggag
300
cactcggtea tgtaccgggt ggactcgggt aagacacgaa tgcagagttt gagtccagat
360
cccaaagccc agtacacaag tatctacgga gccctcaaga aaatcatgca gaccgaaggc
420
ttctggaggc ccttgcgagg cgtcaacgtc atgatcatgg gtgcaggggc agcccatgcc
480
atgtattttg cctgctatga aaacatgaaa aggactttaa atgacgtttt ccaccaccaa
540
ggaaacagcc acctagccaa cggatattttg aaagcgtttg tctggagtta gaaagttctc
600
ttcttcaaca cgteccctccc cagggtgttc ctccctgtga ccagccgcc tcgacttcgg
660
cccgttgct cacgaataaa gaactcagag ttgtgtgtgc aatgcacacc cagacacacg
720
cacgcacaca cagcgcgcg caccacatg cttttttctg ttcccctcgg ctttctgaag
780
cctggggaga aatcagtgac agagggtgtt tgggttttatt gttatgtggg ttttcttttg
840
tatttttttt gtttgttttg tttttaaaca ttcaaaagca attaatgac agacatagga
900
gaaaccctga atagaacaaa aacttttgaa tgctggattc aaaaaaaaaa aaaagttatc
960

```

<210> 5456
 <211> 149
 <212> PRT
 <213> Homo sapiens

<400> 5456
 Pro Arg Thr Ala Gly Ser Trp Pro Ser Ala Ala Ala Gln Thr Arg Ala
 1 5 10 15
 Val Cys Ala Gly Ser Arg Leu Phe Pro Val Ser Asn Trp Leu Val Ser
 20 25 30
 Leu Tyr Gly Leu Ala Ser Phe Arg Pro Gly Val Gly Pro His Pro Thr
 35 40 45
 His Cys Pro Leu Ala Val Arg Leu Ala Cys Pro Ala Val Pro Thr Thr
 50 55 60
 Val Val Lys Gln Arg Leu Gln Met Tyr Asn Ser Gln His Arg Ser Ala
 65 70 75 80
 Ile Ser Cys Ile Arg Thr Val Trp Arg Thr Glu Gly Leu Gly Ala Phe
 85 90 95
 Tyr Arg Ser Tyr Thr Thr Gln Leu Thr Met Asn Ile Pro Phe Gln Ser
 100 105 110
 Ile His Phe Ile Thr Tyr Glu Phe Leu Gln Glu Gln Val Asn Pro His
 115 120 125
 Arg Thr Tyr Asn Pro Gln Ser His Ile Ile Ser Gly Gly Leu Ala Gly
 130 135 140
 Ala Leu Ala Ala Ala
 145

<210> 5457
 <211> 448
 <212> DNA
 <213> Homo sapiens

<400> 5457
 cgcagcggga gcgtgggcag ccaggcgggtg gcgcggagga tggatgggga cagccgagat
 60
 ggcgggcggcg gcaaggacgc caccgggtcg gaggactacg agaacctgcc gactagcgcc
 120
 tccgtgtcca cccacatgac agcaggagcg atggccggga tcctggagca ctcggtcatg
 180
 taccgggtgg actcggtgaa ggtaatgtgg actgtggagc tctgtgctgg tcactttcaa
 240
 ccctgaacct gatgctactt attttgcagt tctaagtga aagtcggcct ggtggatgct
 300
 tccattata atattaaatt tgcttcttcg tgaggtcaca cctcacatcc ccagtgtcac
 360
 ttttaataact agtggtttttt acatgggtggg ccatgaccca ttagtggact ctgcatttaa
 420
 aaataaataa ataaataaaa gaaaaaaaa
 448

<210> 5458
 <211> 81
 <212> PRT

210	215	220
Thr Asp Thr Glu Cys Val Glu Val Cys Thr Pro Asp Pro Phe Leu Pro		
225	230	235
Ser Leu Asp Ala Cys Trp Ser Pro His Thr Leu Leu Gln Ser Leu Asp		240
	245	250
Gln Leu Val Gln Ala Leu Arg Ala Thr Pro Asp Pro Asp Pro Glu Asp		255
	260	265
Arg Gly Pro Arg Pro Gly Ser Pro Ser Ala Leu Leu Pro Gly Pro Gly		270
	275	280
Arg Pro Pro Pro Pro Thr Lys Pro Pro Glu Thr Glu Ala Gln Arg		285
	290	295
Gly Pro Cys Leu Gln Trp Leu Ser Glu Trp Thr Leu Glu Pro Asp Ser		300
305	310	315
		320

<210> 5455

<211> 975

<212> DNA

<213> Homo sapiens

<400> 5455

```

nggtgaggct caaactctct ctttctcctt gtcataacta ttggtttaca gtctttattt
60
gtttaaaagt aaagcacatt gtatgtattt atttggcaat acatgaggcc attaaaaccc
120
tgagcctaag gtaccacagt tagtctcatt tgcctcttgt cctgtgaact ccacttagaa
180
tgtcattgaa cttgggcaga cataattcta gtgtctgttc caaacgcact gtgtcacaga
240
agctagaatt accattagag gcacaaaccc ctgagaatac acaagggggc acgcttccag
300
tagatgtgtt ggggaaggag gagggcagag gggacagggg acaggattca gctttgtggt
360
gggtcctgag ggttcctacc aggggtagcc aggatctggg aaacagatca gcgactctag
420
tctgaagtgg ctgcctgggt cgggggctgc cttcagcaag attcaggcag gagagacgga
480
aatagccacc ttccaggcgt gagtcctgga gataaaaatg gattttaacc taggactgcc
540
gggagctggc cctccgcggc tgctcagact agggctgtgt gtgctggctc tcgctgtttt
600
ccggtgtcta actggcttgt ttctctttat ggcttggctt cattccgacc tggggtgggg
660
ccacatccaa cccactgcc actggctgtc cgtctggcct gccccgcggg tccaaccaca
720
gtggtgaagc agcgcttgca gatgtacaac tcgcagcacc ggtcagcaat cagctgcatc
780
cgagcgggtg ggaggaccga ggggttgggg gccttctacc ggagctacac cacgcagctg
840
accatgaaca tccccttcca gtccatccac ttcacacct atgagttcct gcaggagcag
900
gtcaaccccc accggacct caaccgcag tcccacatca tctcaggcgg gctggccggg
960
gccctcgccg cggcg
975

```

ggtgagctac tgcccccaac ctaccctcta gaggggctgg gaagggccgt tctgggctca
 1440
 cctggcctgg gagaccatc tgggccctgc gtcctctgcc cctcactgct ctgtgcagat
 1500
 cctgtcgccc tcagctgcct cctcccgaga cctaattggtc cctgctgggc tcgagtctgc
 1560
 aggcccggt gcgtgtgcct tggcctcact gtaccagtgg ttccctctct gcccggttc
 1620
 tgagctcagt gtggtgtttg gtgcacaggg gttggtcagg ggccatggcc aaggccctgc
 1680
 cacgcacgcc catccctcag atccactgtg agcaccaacc tgctgcagtc tcttgggccc
 1740
 ctgctggcag ctctgccacg tcaccgctg cctggctccc acacagccat gcattgtcac
 1800
 tctgcctccg ggaccccagc ttgggagctg tgggtctgcc aggtcccacc tctctgtcc
 1860
 cccatgccac aacctgggct cctggctaca gcagggctcc agggactcca aataaatgtt
 1920
 tagtgactgg caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1974

<210> 5454

<211> 320

<212> PRT

<213> Homo sapiens

<400> 5454

Xaa Gly Arg Pro Ala Met Glu Pro Gly Ser Val Glu Asn Leu Ser Ile
 1 5 10 15
 Val Tyr Arg Ser Arg Asp Phe Leu Val Val Asn Lys His Trp Asp Val
 20 25 30
 Arg Ile Asp Ser Lys Ala Trp Arg Glu Thr Leu Thr Leu Gln Lys Gln
 35 40 45
 Leu Arg Tyr Arg Phe Pro Glu Leu Ala Asp Pro Asp Thr Cys Tyr Gly
 50 55 60
 Phe Arg Phe Cys His Gln Leu Asp Phe Ser Thr Ser Gly Ala Leu Cys
 65 70 75 80
 Val Ala Leu Asn Lys Ala Ala Ala Gly Ser Ala Tyr Arg Cys Phe Lys
 85 90 95
 Glu Arg Arg Val Thr Lys Ala Tyr Leu Ala Leu Leu Arg Gly His Ile
 100 105 110
 Gln Glu Ser Arg Val Thr Ile Ser His Ala Ile Gly Arg Asn Ser Thr
 115 120 125
 Glu Gly Arg Ala His Thr Met Cys Ile Glu Gly Ser Gln Gly Val Ala
 130 135 140
 Gly Cys Glu Asn Pro Lys Pro Ser Leu Thr Asp Leu Val Val Leu Glu
 145 150 155 160
 His Gly Leu Tyr Ala Gly Asp Pro Val Ser Lys Val Leu Leu Lys Pro
 165 170 175
 Leu Thr Gly Arg Thr His Gln Leu Arg Val His Cys Ser Ala Leu Gly
 180 185 190
 His Pro Val Val Gly Asp Leu Thr Tyr Gly Glu Val Ser Gly Arg Glu
 195 200 205
 Asp Arg Pro Phe Arg Met Met Leu His Ala Phe Tyr Leu Arg Ile Pro

195 200 205

<210> 5453
<211> 1974
<212> DNA
<213> Homo sapiens

<400> 5453
ntcggcaggc cggccatgga gccaggcagc gtggagaacc tgtccatcgt gtaccggagc
60
cgcgacttcc tgggtggtcaa caagcactgg gacgttcgca ttgacagcaa ggcgtggcgg
120
gagactctga ccctgcagaa gcagctgcgg taccgcttcc ccgagctggc cgaccctgac
180
acctgctacg gggttcagggt ctgccaccag ctggatttct ccaccagcgg ggcgtgtgac
240
gtggccctaa acaaggcagc cgccggcagc gcgtacaggt gcttcaagga gggcgcgctg
300
accaaggctt acctggcatt gctgcggggg cacatccagg agagccgggt aaccatcagc
360
catgccattg gcaggaacag cacggagggc cgggcccaca ccatgtgcat cgagggtcgc
420
cagggtgtgg caggttgtga gaacccaaag ccaagcctca cagatctcgt ggttctggaa
480
cacgggctgt acgcaggcga tcctgtctcc aaagtgtctg tgaagccgct cacgggcccg
540
acacaccagc tgcgcgtgca ctgcagtgcc ctgggcccacc ccgtggtggg cgacctgacc
600
tacggagaag tctcgggccc ggaggaccgg ccgttcagaa tgatgctgca cgctttctac
660
ctgcgcatcc ccacggacac cgagtgtgtg gaggtctgca cgcctgacct cttcctgccc
720
tccttgatg cctgctggag ccccccacaca ctgctgcagt cgctggacca gctcgtgcag
780
gccttacggg ccaaccccca ccctgacccc gaggataggg gccccaggcc aggcagcccc
840
tccgcactcc tgcttgggccc cggccggcct cctccacccc caaccaagcc ccctgagact
900
gaggcacagc ggggcccctg cctgcagtgg ctgtcggagt ggacgctgga accggacagc
960
tgagagccgt ggggctgggg cagggggtgt cagctgcaca gcgggactct agggagatgg
1020
gcgagcgagc gtctgctcac tggctctggg gcctcgaggt gccaggcagc atcaggccca
1080
ctgggttgcc ccggccaggc ctgcgaggaa gggctgaggt ggggcccgca gggggcgcca
1140
ggcagccgtg atcacagggt acgaccgcac cgcggccgtg ggactgatgc gggatcccga
1200
gggccttctt gccacatgc cccgggagaa accgaggccc ctccctctct ctggaacagc
1260
ttccggctct caagcgtcac cccagggggc tcagttttac ggactcaagg tcacctcagg
1320
aagaggcagg gccaggtttt gggataggct ttgcctccag gatgggctgc tcctgggcct
1380

gccctgagaa aaggcagcca cctcctctcc ctggctgaac ccctgccacc ctactcctca
 600
 ccagaattgt cagtggcctt tcaccacagt ggtccttctt gcctgagccc tgcactgtcc
 660
 cagaccacac agaagtctgg tcacctctgg gcgcctggga tggtcaccga agagaagcac
 720
 gctgtccccg tctctcctgg cttctgccag aaaatcgaac aagtgaatt aacacactgt
 780
 tactgccgaa gcctgaaact ccaggactt gtccttgatc cttccagaaa ccaccaggtc
 840
 cggcacttgg agccccccgg agagggacct ccagccgag ccctcaaaga actccatgaa
 900
 atcaggaact gcttgatgaa atgtatctcc ttgtacctgg aagatgaagc ccaaaccacc
 960
 acacctctgt ctcccccagg gctcgggatg tctccagcag cccggccacg cagcttccca
 1020
 ggtgggctcg gggaggtggg agcagggacc atctctgtcc cctccaccct cactccatcc
 1080
 acctcgaga ccaccctccc ccagccagat acggaataaa actacagacg cagacgtcgg
 1140
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1184

<210> 5452

<211> 206

<212> PRT

<213> Homo sapiens

<400> 5452

Met Ser Ser Val Tyr Pro Arg Pro Leu Glu Gly Glu Ser Arg Ala Leu
 1 5 10 15
 Arg Lys Gly Ser His Leu Leu Ser Leu Ala Glu Pro Leu Pro Pro Tyr
 20 25 30
 Ser Ser Pro Glu Leu Ser Val Ala Phe His His Ser Gly Pro Ser Cys
 35 40 45
 Leu Ser Pro Ala Leu Ser Gln Thr Thr Gln Lys Ser Gly His Leu Trp
 50 55 60
 Ala Pro Gly Met Val Thr Glu Glu Lys His Ala Val Pro Val Ser Pro
 65 70 75 80
 Gly Phe Cys Gln Lys Ile Glu Gln Val Gln Leu Thr His Cys Tyr Cys
 85 90 95
 Arg Ser Leu Lys Leu Pro Gly Leu Val Leu Asp Pro Ser Arg Asn His
 100 105 110
 Gln Val Arg His Leu Glu Pro Pro Gly Glu Gly Pro Pro Ser Arg Ala
 115 120 125
 Leu Lys Glu Leu His Glu Ile Arg Asn Cys Leu Met Lys Cys Ile Ser
 130 135 140
 Leu Tyr Leu Glu Asp Glu Ala Gln Thr Pro Thr Pro Leu Ser Pro Pro
 145 150 155 160
 Gly Leu Gly Met Ser Pro Ala Ala Arg Pro Arg Ser Phe Pro Gly Gly
 165 170 175
 Leu Gly Glu Val Gly Ala Gly Thr Ile Ser Val Pro Ser Thr Leu Thr
 180 185 190
 Pro Ser Thr Ser Glu Thr Thr Leu Pro Gln Pro Asp Thr Glu

```

65          70          75          80
Ala Ala Phe Leu Phe Thr Val Cys His Val Gly Ile Xaa Val Gln Asp
          85          90          95
Trp Phe Thr Asp Leu Ser Leu Tyr Arg Phe Leu Gln Thr Ala Glu Met
          100          105          110
Val Lys Pro Ser Thr Pro Ser Pro Ser His Glu Ser Ser Ser Ser Ser
          115          120          125
Gly Ser Asp Glu Gly Thr Glu Tyr Tyr Pro His Leu Val Phe Phe Gln
          130          135          140
Asn Lys Ala Arg Arg Glu Asp Phe Cys Pro Arg Lys Leu Arg Gln Met
145          150          155          160
His Leu Met Ile Asp Gln Leu Met Ala His Ser His Leu Arg Tyr Lys
          165          170          175
Gly Thr Leu Ser Met Leu Gln Cys Asn Val Phe Pro Gly Leu Pro Pro
          180          185          190
Asp Phe Leu Asp Ser Glu Val Asn Leu Phe Leu Val Pro Phe Met Asp
          195          200          205
Ser Glu Ala Glu Ser Glu Asn Pro Pro Arg Ala Gly Pro Gly Ser Ser
          210          215          220
Pro Leu Phe Ser Leu Leu Pro Gly Tyr Arg Gly His Pro Ser Phe Gln
225          230          235          240
Ser Leu Val Ser Lys Leu Arg Ser Gln Val Met Ser Met Ala Arg Pro
          245          250          255
Gln Leu Ser His Thr Ile Leu Thr Glu Lys Asn Trp Phe His Tyr Ala
          260          265          270
Ala Arg Ile Trp Asp Gly Val Arg Lys Ser Ser Ala Leu Ala Glu Tyr
          275          280          285
Ser Arg Leu Leu Ala
          290

```

<210> 5451

<211> 1184

<212> DNA

<213> Homo sapiens

<400> 5451

```

ncacgcctgg ctaaattttg tatttttggg agagacgggg tttcacgtgt tggccaggct
60
gggtctgaac tgctgacctc aagtgatctg tccgcctcag cctcccaaag tgctgggatt
120
acagatgtga gccatcatgc cgggctaatt tttttgtatt ttagtagaga cagggtttca
180
ccgtgttagc caggatggtc ttgatctcct gaccttgtga tccaccagcc tcagcctccc
240
aaagtgcctg gattacaggc gtgagccact gtgcccgcc aagaattttt ttatcgataa
300
catagtgagc tctctgcctc ttcggaacga tgtccacttt gcttatgatc aacccaagca
360
ggactcttct ctccctggac gcctctcccc tgggtctggaa tcttcagtt ctgccagaat
420
tggcctttcc cagatgctgc aaacttccag ttgaaccctt ttttctgtgt ggccccctggg
480
gctgcgagac caaatccat gagttctgtg taccctagac ctttggaagg tgagagcagg
540

```

gctgccttcc ttttcacggc ctgccatgtg gggattnntg tccaggactg gttcacagac
 300
 ctcagtctct acaggttcct gcagacagca gagatgggtga agccctccac cccatcccc
 360
 agccacgagt ccagcagctc atcgggctcc gatgaaggca ccgagtacta cccccaccta
 420
 gtcttcttcc agaacaaagc tcgccgagag gacttctgtc ctcggaagct gcggcagatg
 480
 cacctgatga ttgaccagct catggccac tccacactgc gttacaaggg aactctgtcc
 540
 atgttacaat gcaatgtctt cccggggctt ccacctgact tcttgactc tgaggtcaac
 600
 ttattctctg tacccttcat ggacagtga gacagagtga aaaaccacc aagagcagga
 660
 cctggttcca gccactctt ctccctgctg cctgggtatc gtggccacc cagtttccag
 720
 tccttggtga gcaagctccg gagccaagt atgtccatgg cccggccaca gctgtcacac
 780
 acgatcctca ccgagaagaa ctggttccac tacgtgccc ggatctggga tggggtgaga
 840
 aagtcctctg ctctggcaga gtacagccgc ctgctggcct gaggccaagg agaggaatgt
 900
 catgcagggg acctcctggg tccgcagtgt actgcgaggg agcacagatg tccatcccc
 960
 gctggggtgg agagcggcag caggcctgat ggatgaggga tcgtggcttc ccggcccaga
 1020
 gacatgaggt gtccagggcc agggccccca ccctcagttg gggctgttcc gggggtgact
 1080
 gtgagcgatc ccacccaaa cctgagatgg ggcagccgt cctgtgtctt ccacagggac
 1140
 aagcagtggg aggagtctga atggtcacca ggaagcccg gctccatctt gacctcttt
 1200
 ttcagggaca ggagcaacag gccctcttcc cctgactcta agcccttccc tgtaagggtga
 1260
 ggcaggggtc ggagagctct ttattggaac agatctgggtg gttcaaataa acacagtcac
 1320
 gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1359

<210> 5450

<211> 293

<212> PRT

<213> Homo sapiens

<400> 5450

Ser	Pro	Glu	Glu	Asp	Gln	Arg	Thr	Tyr	Val	Phe	Arg	Ala	Gln	Ser	Ala
1				5					10					15	
Glu	Met	Lys	Glu	Arg	Gly	Gly	Asn	Gln	Thr	Ser	Gly	Ile	Asp	Phe	Phe
			20				25						30		
Ile	Thr	Gln	Glu	Arg	Ile	Val	Phe	Leu	Asp	Thr	Gln	Pro	Ile	Leu	Ser
		35				40						45			
Pro	Ser	Ile	Leu	Asp	His	Leu	Ile	Asn	Asn	Asp	Arg	Lys	Leu	Pro	Pro
	50					55					60				
Glu	Tyr	Asn	Leu	Pro	His	Thr	Tyr	Val	Glu	Met	Gln	Ser	Leu	Gln	Ile

aacatcaagc cttgggattc ttggagcaag cagaaagcca gtaacttcgc tctgttagag
 1320
 gtggaggatt ttcctatggt tccccccatt tcttgatttg tatttttaga tggattaaat
 1380
 agtctcctgt ttttaaacca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1440
 aaaa
 1444

<210> 5448
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 5448
 Gly Ile Asp Asp Leu Ile Val Val Leu Cys Ser Lys Lys Thr Phe Gln
 1 5 10 15
 Ile Thr Lys Gln Gly Asp Gly Val Asp Phe Leu Ser Trp Phe Leu Asn
 20 25 30
 Ala Leu His Ser Ala Leu Gly Gly Thr Lys Lys Lys Lys Lys Thr Ile
 35 40 45
 Val Thr Asp Val Phe Gln Gly Ser Met Arg Ile Phe Thr Lys Lys Leu
 50 55 60
 Pro His Pro Asp Leu Pro Ala Glu Glu Lys Glu Gln Leu Leu His Asn
 65 70 75 80
 Asp Glu Tyr Gln Glu Thr Met Val Glu Ser Thr Phe Met Tyr Leu Thr
 85 90 95
 Leu Asp Leu Pro Thr Ala Pro Leu Tyr Lys Asp Glu Lys Glu Gln Leu
 100 105 110
 Ile Ile Pro Gln Val Pro Leu Phe Asn Ile Leu Ala Lys Phe Asn Gly
 115 120 125
 Ile Thr Glu Lys Glu Tyr Lys Thr Tyr Lys Glu Asn Phe Leu Lys Arg
 130 135 140
 Phe Gln Leu Thr Lys Leu Pro Pro Tyr Leu Ile Phe Cys Ile Lys Arg
 145 150 155 160
 Phe Thr Lys Asn Asn Phe Phe Val Glu Lys Asn Pro Thr Xaa Cys Gln
 165 170 175
 Phe Pro Tyr Tyr Lys Cys Gly Ser Glu Arg Ile Leu Val
 180 185

<210> 5449
 <211> 1359
 <212> DNA
 <213> Homo sapiens

<400> 5449
 tctccagagg aggaccagag gacttatggt ttccggggccc agagcgctga aatgaaggaa
 60
 cgaggggggca accagaccag tggcatcgac ttctttatta cccaagaacg gattgttttc
 120
 ctggacacac agcccatcct gagcccttct atcctagacc atctcatcaa taatgaccgc
 180
 aaactgcttc cagagtacaa ccttccccac acttacgttg aaatgcagtc actccagatt
 240

65		70		75		80									
His	Ala	Asp	Ser	Asp	Met	Arg	Ala	His	Ser	Leu	Ser	His	Asp	Ser	Gln
				85					90					95	
Thr	Val	Glu	Thr	Arg	Gln	Val	Gly	Leu	Gly	Cys					
			100					105							

<210> 5447

<211> 1444

<212> DNA

<213> Homo sapiens

<400> 5447

```

nngcaggtaa gtggtacat catatgcccg ggacaatttg gcttgcttgt ccaagtttgc
60
aatttgctgc tttgtgaaag tgggcttcaa cacatacgtg atatcctcca atgaggaatc
120
gatgatctca tagttgtact ttgcagtaag aagacttttc agatcaccaa acaaggagat
180
ggcgttgact ttctgtcttg gtttctgaat gctctgcact cagctctggg gggcaciaag
240
aagaaaaaga agactattgt gactgatgtt ttccaggggt ccatgaggat cttcactaaa
300
aagcttcccc atcctgatct gccagcagaa gaaaaagagc agttgctcca taatgacgag
360
taccaggaga caatggtgga gtccactttt atgtacctga cgctggacct tcctactgcc
420
cccctctaca aggacgagaa ggagcagctc atcattcccc aagtgccact cttcaacatc
480
ctggctaagt tcaatggcat cactgagaag gaatataaga cttacaagga gaactttctg
540
aagcgcttcc agcttaccaa gttgcctcca tatctaactt tttgtatcaa gagattcact
600
aagaacaact tctttgttga gaagaatcca actnattgtc aatttcctta ttacaaatgt
660
ggatctgaga gaatacttgt ctgaagaagt acaagcagta cacaagaata ccacctatga
720
cctcattgcc aacatcgtgc atgacggcaa gccctccgag ggctcctacc ggatccacgt
780
gcttcatcat gggacaggca aatggtatga attacaagac ctccagggtga ctgacatcct
840
tccccagatg atcacactgt cagaggctta cattcagatt tggaagaggc gagataatga
900
tgaaaccaac cagcaggggg cttgaaggag gcgtctaggg ctttgctccc aagggtgtg
960
gctgatgatg gtaaataaga acacagaagc tgtagctgaa cacaggctgg ctggtgggct
1020
tcctaggcca gccagcttg tatgggttct ggctacacca gagcaccaag agcccacttg
1080
cctgggatgg cccacactg tcaactcagct gttctttgat ctttttttc tagattgatg
1140
ctcctttctc ccatgcattg agctcccatc tagcttcagc agggcagaac cttctccag
1200
atgtgtgtaa cttatgtctt gagtatctgg gagtagttga agaacagata attccttcca
1260

```

agaaaaggcg ggggtcggac tgacgccgtc ctgggccatg tccacgtctg gggctctgcag
 120
 gttccatctc cctttccact gtgcctaacc ttacatctat tacctacatc cagcaagaca
 180
 cgattttcca cgatgagttg attcgtaatt ccatttatgt gctagttttt agaattttcc
 240
 tgtggggttt tttttactta cttatgattt taattttgtt tgctttaaaa aaaacacatg
 300
 cataggaaaag aatgcttcct ttcatttcaa ttaaaaacaa caaattgctt ttttttaagc
 360
 aaaaattcat tgaggggggg gctcgcgttg tacaaagaaa atcagacca ccgggatggc
 420
 tgtgatcaaa gagacagtaa caagggttagg gaggtggaga tgcgaatcca aacacacaac
 480
 ttgtgcaaag gtcaagtggc cacagccgcc acggaaaaca ggctggcggg tcctccgacg
 540
 ttcaacacac agtcgccacg ggacacagtg gttccacccc caggtgtgca gcaatagaca
 600
 tcacagccca cgtccgcacg cagactcgga cacgcgtgct cacagcccac gttcgcacgc
 660
 agactcagac atgcgtgctc acagcctcag tcatgacagc cagacagtgg aaacaaggca
 720
 ggtgggcctc ggctgctgag ggagcaacag cagaacgggtg ctcagccctg gagaggaagg
 780
 acgcctggac cctggcccca caccacagca tccacaatgt ggtgcccaacc aacaggccac
 840
 gcacacagag gccatgggccc agacgcttcc actgacacga aatgcccagg agaggcacag
 900
 ccggcgacag aacggggacc cgtgtctgcc gcccaggag aggctgcagg ccggaaactg
 960
 gaggattaca gggcgcgagt gtcgttttag ggagatgaaa atgttctaaa attggctgtg
 1020
 gcaattgttg cacaactctg caaatatact aaaaaccact gaattgtaca tttcaaaatg
 1080
 ggtgaattgt acggtgcttg tattatacct caataaagct atttttaag aaacaaaatt
 1140
 ttaaatacgt aaaaaaatca gaaagtgaat tctggaatta acattcc
 1187

<210> 5446

<211> 107

<212> PRT

<213> Homo sapiens

<400> 5446

Met Ala Val Ile Lys Glu Thr Val Thr Arg Val Gly Arg Trp Arg Cys
 1 5 10 15
 Glu Ser Lys His Thr Thr Cys Ala Lys Val Lys Trp Pro Gln Pro Pro
 20 25 30
 Arg Lys Thr Gly Trp Arg Phe Leu Arg Arg Ser Thr His Ser Arg His
 35 40 45
 Gly Thr Gln Trp Phe His Pro Gln Val Cys Ser Asn Arg His His Ser
 50 55 60
 Pro Arg Pro His Ala Asp Ser Asp Thr Arg Ala His Ser Pro Arg Ser

85 90 95
 Met Phe Val Ser Arg Gly Gly His Gly Gln Gln Asp Leu Phe Arg Val
 100 105 110
 Leu Lys Ala Tyr Thr Leu Tyr Arg Pro Glu Glu Gly Tyr Cys Gln Ala
 115 120 125
 Gln Ala Pro Ile Ala Ala Val Leu Leu Met His Met Pro Ala Glu Gln
 130 135 140
 Ala Phe Trp Cys Leu Val Gln Ile Cys Glu Lys Tyr Leu Pro Gly Tyr
 145 150 155 160
 Tyr Ser Glu Lys Leu Glu Ala Ile Gln Leu Asp Gly Glu Ile Leu Phe
 165 170 175
 Ser Leu Leu Gln Lys Val Ser Pro Val Ala His Lys His Leu Ser Arg
 180 185 190
 Gln Lys Ile Asp Pro Leu Leu Tyr Met Thr Glu Trp Phe Met Cys Ala
 195 200 205
 Phe Ser Arg Thr Leu Pro Trp Ser Ser Val Leu Arg Val Trp Asp Met
 210 215 220
 Phe Phe Cys Glu Gly Val Lys Ile Ile Phe Arg Val Gly Leu Val Leu
 225 230 235 240
 Leu Lys His Ala Leu Gly Ser Pro Glu Lys Val Lys Ala Cys Gln Gly
 245 250 255
 Gln Tyr Glu Thr Ile Glu Arg Leu Arg Ser Leu Ser Pro Lys Ile Met
 260 265 270
 Gln Glu Ala Phe Leu Val Gln Glu Val Val Glu Leu Pro Val Thr Glu
 275 280 285
 Arg Gln Ile Glu Arg Glu His Leu Ile Gln Leu Arg Arg Trp Gln Glu
 290 295 300
 Thr Arg Gly Glu Leu Gln Cys Arg Ser Pro Pro Arg Leu His Gly Ala
 305 310 315 320
 Lys Ala Ile Leu Asp Ala Glu Pro Gly Pro Arg Pro Ala Leu Gln Pro
 325 330 335
 Ser Pro Ser Ile Arg Leu Pro Leu Asp Ala Pro Leu Pro Gly Ser Lys
 340 345 350
 Ala Lys Pro Lys Pro Pro Lys Gln Ala Gln Lys Glu Gln Arg Lys Gln
 355 360 365
 Met Lys Gly Arg Gly Gln Leu Glu Lys Pro Pro Ala Pro Asn Gln Ala
 370 375 380
 Met Val Val Ala Ala Ala Gly Asp Ala Cys Pro Pro Gln His Val Pro
 385 390 395 400
 Pro Lys Asp Ser Ala Pro Lys Asp Ser Ala Pro Gln Asp Leu Ala Pro
 405 410 415
 Gln Val Ser Ala His His Arg Ser Gln Glu Ser Leu Thr Ser Gln Glu
 420 425 430
 Ser Glu Asp Thr Tyr Leu
 435

<210> 5445

<211> 1187

<212> DNA

<213> Homo sapiens.

<400> 5445

gcaaggtcaa gccagctcag gggacatggt gggcaggggg ctccagatcc cacggtgggc
 60

gtctgggaca tgttcttctg tgaaggggtc aagatcatct tccgggtggg gctgggtgctg
 1020
 ctgaagcacg cgctgggctc ccctgagaag gtcaaagcct gccagggcca gtacgagacc
 1080
 atcgagcgac tgcggagcct cagccccaag atcatgcagg aggcctttct ggtccaggag
 1140
 gtggtggagt tgcccgtgac agagcgccag attgagcgcg aacacctcat tcagctgcgg
 1200
 cgctggcagg agaccggggg tgagctgcag tgccgctccc cgcccaggct gcatgggtgcc
 1260
 aaggctatct tggatgcaga acctgggtccc cggcctgccc tacaaccttc accatccatc
 1320
 cgctgcccc tagatgcccc cctccctggc tccaaagcca agcccaagcc acccaagcag
 1380
 gcccagaagg agcagcggaa acagatgaag gggagagggc agctggagaa gccccagcc
 1440
 ccaaatcaag ccatgggtgt ggccgctgca ggagatgcat gtccccaca gcatgtgccc
 1500
 ccgaaggact cagcccccaa ggactcagcc cctcaggatt tggctcccca ggtctcagcc
 1560
 caccaccgt cccaggagag cttgacgtcc caagagagtg aggacaccta cttgtaacct
 1620
 tggcagctaa ggctccagg gcgggggtctc catataacta cacggttcat gaactgacat
 1680
 tccacatcct gccaccctc tgagggccaa gctgcctggc cactgggctg ggctggagtc
 1740
 tggctggtcc aacacagatt ctgcctggtc caacacagat tctgcctgag cctccttatt
 1800
 tattttcttt acagtggcac tcaggctggc ccagccaggg caggcagaag ctagggcctg
 1860
 ggggggtggg cctccttcag cccctcctc ctgggggatg ctccccaggg ttaggggtgct
 1920
 ggtgtgaggg gaaaggggtg ggtgttcttt gtgtaaaata gaaacatggt tttgtacaga
 1980
 aataaacagc cttgtataga gaaaaaaaa aaaaaaaaa a
 2021

<210> 5444

<211> 438

<212> PRT

<213> Homo sapiens

<400> 5444

Leu	Glu	Glu	Val	Pro	Leu	Glu	Val	Leu	Arg	Gln	Arg	Glu	Ser	Lys	Trp
1				5				10						15	
Leu	Asp	Met	Leu	Asn	Asn	Trp	Asp	Lys	Trp	Met	Ala	Lys	Lys	His	Lys
			20					25					30		
Lys	Ile	Arg	Leu	Arg	Cys	Gln	Lys	Gly	Ile	Pro	Pro	Ser	Leu	Arg	Gly
		35					40					45			
Arg	Ala	Trp	Gln	Tyr	Leu	Ser	Gly	Gly	Lys	Val	Lys	Leu	Gln	Gln	Asn
	50				55					60					
Pro	Gly	Lys	Phe	Asp	Glu	Leu	Asp	Met	Ser	Pro	Gly	Asp	Pro	Lys	Trp
65				70					75					80	
Leu	Asp	Val	Ile	Glu	Arg	Asp	Leu	His	Arg	Gln	Phe	Pro	Phe	His	Glu

130	135	140
Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile Lys Gln		
145	150	155
Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Arg Leu Arg Phe		160
	165	170
Ile Leu Pro Val Asn Glu Gly Lys Lys Leu Lys Glu Lys Leu Lys Pro		175
	180	185
Leu Ile Lys Val Ile Glu Ser Glu Asp Tyr Gly Gln Gln Leu Glu Ile		190
	195	200
Val Cys Leu Ile Asp Pro Gly Cys Phe Arg Glu Ile Asp Glu Leu Ile		205
	210	215
Lys Lys Glu Thr Lys Gly Lys Gly Ser Leu Glu Val Leu Asn Leu Lys		220
225	230	235
Asp Val Glu Glu Gly Asp Glu Lys Phe Glu		240
	245	250

<210> 5443

<211> 2021

<212> DNA

<213> Homo sapiens

<400> 5443

cagatgcaga cactcactca gcctctgcct cagagaggta ccatgggtcc tggccacatt
60
agggaagtag gcacttgaac cacctgctgt ctctctagct tatgccttga ggcggtggat
120
ggggaggtgg cgtgttcctt ctcatctgca ataggatggt ccgaggtagc agtcctgaag
180
ggaacagcag ggatggtagg caggaagaat ggaggtctga ccaggctggc ggctgggaat
240
gaagccaggg cctttgcttc ccttggcacc tctcacaggc cctgccctct gctccacagg
300
ctggaggaag tccccctgga ggtgctgagg cagagggagt ccaagtggct ggacatgctc
360
aacaactggg acaaatggat ggccaagaag cacaaaaaga ttcgtctgcg gtgccaaaag
420
ggcatcccg cttctctgcg gggccgtgct tggcagtacc tgtcaggagg caaggatgaag
480
ttacagcaga accctggaaa gtttgacgag ctggacatgt cccctgggga cccaagtgg
540
ctggacgtga ttgagcgtga cctgcaccgg cagttcccat tccatgagat gtttgtgtcc
600
cggggggggc acggccagca ggacctattc cgtgtgctga aggcctacac gctgtaccgg
660
cccgaggagg gctactgcca ggcccaggcg cccattgccg ctgtcttgct catgcatatg
720
cctgctgagc aagccttctg gtgcctggta cagatctgtg agaagtacct gcccggtac
780
tacagcgaga aactggaggc gatccagctg gacggggaga tccttttctc gctgttgca
840
aaggtgtcgc cggtggccca caagcacctc agccgtcaga agatcgaccc gctcctctat
900
atgacagaat ggttcatgtg cgccttctcc cgaaccttgc cttggagctc tgtgctgcgt
960

caacagttag aaatcgtatg tctgattgac ccgggctgct tccgagaaat tgatgagcta
 840
 ataaaaaagg aaactaaagg caaagggttct ttggaagtac tcaatctgaa agatgtagaa
 900
 gaaggagatg agaaatttga atgacaccca tcaatctctt cacctctaaa acactaaagt
 960
 gtttccgttt ccgacggcac tgtttcatgt ctgtggtctg ccaaatactt gcttaaaacta
 1020
 ttgacattt tctatctttg tgttaacagt ggacacagca aggctttcct acataagtat
 1080
 aataatgtgg gaatgatttg gttttaatta taaactgggg tctaaatcct aaagcaaaat
 1140
 tgaaactcca agatgcaaag tccagagtgg cattttgcta ctctgtctca tgccttgata
 1200
 gctttccaaa atgaaagtta cttgaggcag ctcttggtgg tgaaaagtta tttgtacagt
 1260
 agagtaagat tattaggggt atgtctatac aacaaaaggg ggggtcttct ctaaaaaaga
 1320
 aaacatatga tgcttcattt ctacttaatg gaacttgtgt tctgagggtc attatgggtat
 1380
 cgtaataata agcttggtat atgttcctga ttatctgaga aacagatata gaaaaattgt
 1440
 gtcggactta aataattttc gttgaacatg ctgccataac ttagattatt cttgggttaaa
 1500
 aaataaaagt cacttatttc taattcttaa agtttataat atatattaat atagctaaaa
 1560
 ttgtatgtaa tcaataaaaac cactcttatg tttattaaac tatggcttgt gtttctagac
 1620
 aaaaaaaaaa aaaaa
 1635

<210> 5442

<211> 250

<212> PRT

<213> Homo sapiens

<400> 5442

Met	Ser	Ile	Phe	Thr	Pro	Thr	Asn	Gln	Ile	Arg	Leu	Thr	Asn	Val	Ala
1				5					10					15	
Val	Val	Arg	Met	Lys	Arg	Ala	Gly	Lys	Arg	Phe	Glu	Ile	Ala	Cys	Tyr
		20						25					30		
Lys	Asn	Lys	Val	Val	Gly	Trp	Arg	Ser	Gly	Val	Glu	Lys	Asp	Leu	Asp
		35				40						45			
Glu	Val	Leu	Gln	Thr	His	Ser	Val	Phe	Val	Asn	Val	Ser	Lys	Gly	Gln
		50				55				60					
Val	Ala	Lys	Lys	Glu	Asp	Leu	Ile	Ser	Ala	Phe	Gly	Thr	Asp	Asp	Gln
65				70					75					80	
Thr	Glu	Ile	Cys	Lys	Gln	Ile	Leu	Thr	Lys	Gly	Glu	Val	Gln	Val	Ser
			85					90					95		
Asp	Lys	Glu	Arg	His	Thr	Gln	Leu	Glu	Gln	Met	Phe	Arg	Asp	Ile	Ala
		100					105						110		
Thr	Ile	Val	Ala	Asp	Lys	Cys	Val	Asn	Pro	Glu	Thr	Lys	Arg	Pro	Tyr
		115					120					125			
Thr	Val	Ile	Leu	Ile	Glu	Arg	Ala	Met	Lys	Asp	Ile	His	Tyr	Ser	Val

```

      290              295              300
Tyr Lys Thr Leu Lys Lys Asp Glu Asp Ile Pro Leu Phe Pro Val Gln
305              310              315              320
Thr Lys Tyr Met Asp Val Val Lys Glu Arg Ile Arg Leu Ala Arg Gln
      325              330              335
Ile Glu Lys Ser Glu Tyr Arg Asn Phe Gln Ala Cys Leu His Asn Ser
      340              345              350
Trp Ile Glu Gln Ala Ala Ala Ala Leu Glu Ile Glu Leu Glu Glu Asp
      355              360              365
Met Tyr Lys Gly Gly Lys Ala Asp Gln Gln Glu Glu Arg Arg Arg Gln
      370              375              380
Lys Gln Met Lys Val Leu Lys Lys Glu Leu Arg His Leu Leu Ser Gln
385              390              395              400
Pro Leu Phe Thr Glu Ser Gln Lys Thr Lys Tyr Pro Thr Gln Ser Gly
      405              410              415
Lys Pro Pro Leu Leu Val Ser Ala Pro Ser Lys Ser Glu Ser Ala Leu
      420              425              430
Ser Cys Leu Ser Lys Gln Lys Lys Lys Lys Thr Lys Lys Pro Lys Glu
      435              440              445
Pro Gln Pro Glu Gln Pro Gln Pro Ser Thr Ser Ala Asn
      450              455              460

```

<210> 5441

<211> 1635

<212> DNA

<213> Homo sapiens

<400> 5441

```

ncagacacac tgtgacggct gcctgaagct agtgagtcgc ggcgcgcgcg actggtgggt
60
gggtcagtcg cgcgcgcgcga tcggtcggtta ccgcgaggcg ctggtggcct tcaggctgga
120
cggcgcgggt cagccctggt tcgccggctt ctgggtcttt gaacagccgc gatgtcgatc
180
ttcaccccca ccaaccagat ccgcctaacc aatgtggccg tggtagcgat gaagcgtgcc
240
gggaagcgct tcgaaatcgc ctgctacaaa aacaaggctg tcggctggcg gagcggcggtg
300
gaaaaagacc tcgatgaagt tctgcagacc cactcagtggt ttgtaaagt ttctaaaggt
360
caggttgcca aaaaggaaga tctcatcagt gcgtttgga cagatgacca aactgaaatc
420
tgtaagcaga ttttgactaa aggagaagtt caagtatcag ataaagaaag acacacacaa
480
ctggagcaga tgtttaggga cattgcaact attgtggcag acaaagtgt gaatcctgaa
540
acaaagagac catacacctg gatccttatt gagagagcca tgaaggacat ccactattcg
600
gtgaaaacca acaagagtac aaaacagcag gctttggaag tgataaagca gttaaaagag
660
aaaatgaaga tagaacgtgc tcacatgagg ctctcggttca tccttcagat gaatgaaggc
720
aagaagctga aagaaaagct caagccactg atcaaggcca tagaaagtga agattatggc
780

```


ttgatgttgt gaaataacat tcgttactgt tgtgaaaatc tgtcatgagc atttgtttaa
 4020
 taagcatacc attgaaacat gccacttgaa gatttctctg agatcatgag tttgtttaca
 4080
 cttgtctcaa gcctatctat agagaccctt ggatttagaa ttatagaact aaagtatctg
 4140
 agattacaga gatctcagag gttatgtgtt ctaactatta tcaaatgaat aaatcctctc
 4200
 tatcacatcc cccaaaaaaa aaaaaaaaaa aaaa
 4234

<210> 5440

<211> 461

<212> PRT

<213> Homo sapiens

<400> 5440

Leu	Ala	Val	Gln	Val	Lys	Gln	His	Ile	Asp	Ala	Val	Ala	Arg	Phe	Thr	1	5	10	15
Gly	Ile	Lys	Thr	Ala	Ile	Leu	Val	Gly	Gly	Met	Ser	Thr	Gln	Lys	Gln	20	25	30	
Gln	Arg	Met	Leu	Asn	Arg	Arg	Pro	Glu	Ile	Val	Val	Ala	Thr	Pro	Gly	35	40	45	
Arg	Leu	Trp	Glu	Leu	Ile	Lys	Glu	Lys	His	Tyr	His	Leu	Arg	Asn	Leu	50	55	60	
Arg	Gln	Leu	Arg	Cys	Leu	Val	Val	Asp	Glu	Ala	Asp	Arg	Met	Val	Glu	65	70	75	80
Lys	Gly	His	Phe	Ala	Glu	Leu	Ser	Gln	Leu	Glu	Met	Leu	Asn	Asp		85	90	95	
Ser	Gln	Tyr	Asn	Pro	Lys	Arg	Gln	Thr	Leu	Val	Phe	Ser	Ala	Thr	Leu	100	105	110	
Thr	Leu	Val	His	Gln	Ala	Pro	Ala	Arg	Ile	Leu	His	Lys	Lys	His	Thr	115	120	125	
Lys	Lys	Met	Asp	Lys	Thr	Ala	Lys	Leu	Asp	Leu	Leu	Met	Gln	Lys	Ile	130	135	140	
Gly	Met	Arg	Gly	Lys	Pro	Lys	Val	Ile	Asp	Leu	Thr	Arg	Asn	Glu	Ala	145	150	155	160
Thr	Val	Glu	Thr	Leu	Thr	Glu	Thr	Lys	Ile	His	Cys	Glu	Thr	Asp	Glu	165	170	175	
Lys	Asp	Phe	Tyr	Leu	Tyr	Tyr	Phe	Leu	Met	Gln	Tyr	Pro	Gly	Arg	Ser	180	185	190	
Leu	Val	Phe	Ala	Asn	Ser	Ile	Ser	Cys	Ile	Lys	Arg	Leu	Ser	Gly	Leu	195	200	205	
Leu	Lys	Val	Leu	Asp	Ile	Met	Pro	Leu	Thr	Leu	His	Ala	Cys	Met	His	210	215	220	
Gln	Lys	Gln	Arg	Leu	Arg	Asn	Leu	Glu	Gln	Phe	Ala	Arg	Leu	Glu	Asp	225	230	235	240
Cys	Val	Leu	Leu	Ala	Thr	Asp	Val	Ala	Ala	Arg	Gly	Leu	Asp	Ile	Pro	245	250	255	
Lys	Val	Gln	His	Val	Ile	His	Tyr	Gln	Val	Pro	Arg	Thr	Ser	Glu	Ile	260	265	270	
Tyr	Val	His	Arg	Ser	Gly	Arg	Thr	Ala	Arg	Ala	Thr	Asn	Glu	Gly	Leu	275	280	285	
Ser	Leu	Met	Leu	Ile	Gly	Pro	Glu	Asp	Val	Ile	Asn	Phe	Lys	Lys	Ile				

ctggaagaag acatgtataa gggaggaaaa gctgaccagc aagaagaacg tcggagacaa
2400
aagcagatga aggttctgaa gaaggagctg cgccacctgc tgtcccagcc actgtttacg
2460
gagagccaga aaaccaagta tcccactcag tctggcaagc cggccctgct tgtgtctgcc
2520
ccaagtaaga gcgagtctgc tttgagctgt ctctccaagc agaagaagaa gaagacaaag
2580
aagccgaagg agccacagcc ggaacagcca cagccaagta caagtgcaaa ttaactgccc
2640
tggtcaagtg tgtcagtgc tgcacattgg tttctgttct ctggctatct gcaaaacctc
2700
tcccacctct gtgtttcact ccaccaccaa ccccaggtaa aaaagtctcc ctctcttcca
2760
ctcacacca tagcgggaga gacctcatgc agatttgcac tgttttggag taagaattca
2820
atgcagcagc ttaatttttc tgtattgcag tgtttatagg cttcttgtgt gttaaacttg
2880
atttcataaa ttaaaaacaa tggtcagaaa aaaaaaaaa accggaaccg gcggcaccag
2940
ctcggagaga aatcgatgtt gtagtgacct tcagtaaaag agcggttttt catagagggtg
3000
ccgtttttaga ctacctatct aagaggcacg aaaaacaaat acatctaata ggttaagtaa
3060
aaaaccatct atttcggaca ataaaagtta ttttctacac acgttggctct tcattttact
3120
cgttaacagt atcatacatc cttctaagct tatctttttg acgtgaaagt gtagtagtat
3180
gtctccacct ggcagctatg tagttaatat ttttgtctgt tgtaatgtta tcaagtaccg
3240
aacattttcc taatgaaata gtggaaaaga caaccttttt ctccatttct atttggtttt
3300
ttagatcacg tacataacaa ggaatcgaat aaataatgaa gtgttttata aagagtatcc
3360
gtcttggagg gagattccag ttgggagggt ccataggcag ttcttaccac gaagatgtcg
3420
attccattct ccaacacca ctaccgaatt ccacaaggat ttgggaatct tcttgaaggg
3480
ctgacacgag agattctgag agagcaaccg gacaatatac cagcttttgc agcagcctat
3540
tttgagagcc ttctagagaa aagagagaaa accaactttg atccagcaga atgggggagt
3600
aaggtagaag accgcttcta taacaatcat gcattcgagg agcaagaacc acctgagaaa
3660
agtgatccta aacaagaaga gtctcagata tctgggaagg aggaagagac atcagtcacc
3720
atcttagact cttctgagga agataaggaa aaagaagagg ttgctgctgt caaaatccaa
3780
gctgccttcc ggggacacat agccagagag gaggcaaga aaatgaaaac aaatagtctt
3840
caaatgagg aaaaagagga aaacaagtga ggacactggt tttacctcca ggaaacatga
3900
aaaataatcc aaatccatca accttcttat taatgtcatt tctccttgag gaaggaagat
3960

ttggcacctg ccatccgtga caaactggac atccttgggg ctgctgagac aggaagtggg
780
aaaactcttg cctttgccat cccaatgatt catgcggtgt tgcagtggca gaagaggaat
840
gctgcccctc ctccaagtaa caccgaagca ccacctggag agaccagaac tgaggccgga
900
gctgagacta gatcaccagg caaggctgaa gctgagtctg atgcattgcc tgacgatact
960
gtaattgaga gtgaagcact gcccagtgat attgcagccg aggccagagc caagactgga
1020
ggcactgtct cagaccaggc gttgctcttt ggtgacgatg atgctggtga agggccttct
1080
tccctgatca gggagaaacc tgttcccaa cagaatgaga atgaggagga aaatcttgat
1140
aaagagcaga ctggaaatct aaaacaggag ttggatgaca aaagcgccac ctgtaaggca
1200
tatccaaagc gtcctctgct tggactgggt ctgactccca ctcgagagct ggccgtccag
1260
gtcaaacagc acattgatgc tgtggccagg ttacaggaa ttaaaactgc tattttggtt
1320
ggtggaatgt ccacgcagaa acagcagagg atgctgaacc gtcgtcctga gattgtggtt
1380
gctactccag gccggtgtg ggaattaatt aaagaaaagc attatcattt gaggaacctt
1440
cggcagctca ggtgcctggt agtggatgag gctgaccgga tggttgagaa aggccatttt
1500
gctgagctct cacagctgct agagatgctc aatgactccc aatacaaccc aaagagacaa
1560
acgcttggtt tttctgccac actcaccctg gtgcatcagg ctctgctcg aatccttcat
1620
aagaagcaca ccaagaaaat ggataaaaca gccaaacttg acctccttat gcagaaaatt
1680
ggcatgaggg gcaagcccaa ggtcattgac ctcaacagga atgaggccac ggtggagacg
1740
ctaacagaga ccaagatcca ttgtgagact gatgagaaag acttctactt gtactacttc
1800
ctgatgcagt atccaggccg cagcttagtg tttgccaaca gtatctcctg catcaaacgc
1860
ctctctgggc tcctcaaagt ccttgatata atgcccttga ccctgcatgc ctgtatgcac
1920
cagaagcaga ggctcagaaa cctggagcag tttgcccgtc tggaagactg tgttctcttg
1980
gcaacagatg tggcggtctg gggctctggat attcctaaag tccagcatgt catccattac
2040
caggtcccac gtacctcgga gatttatgtc caccgaagtg gtcgaactgc tcgagctacc
2100
aatgaaggcc tcagtctgat gctcattggg cctgaggatg tgatcaactt taagaagatt
2160
tacaaaacgc tcaagaaaga tgaggatata ccaactgttc ccgtgcagac aaaatacatg
2220
gatgtggtca aggagcgaat ccgttttagct cgacagattg agaaatctga gtatcggaac
2280
ttccaggctt gcctgcacaa ctcttggtt gagcaggcag cagctgccct ggagattgag
2340

65					70					75				80
Lys	Arg	Lys	Ala	Tyr	Ser	Glu	Arg	Arg	Ile	Met	Gly	Tyr	Ser	Met
														Gln
					85				90					95
Glu	Met	Tyr	Glu	Val	Val	Ser	Asn	Val	Gln	Glu	Tyr	Arg	Glu	Phe
														Val
			100					105					110	
Pro	Trp	Cys	Lys	Lys	Ser	Leu	Val	Val	Ser	Ser	Arg	Lys	Gly	His
														Leu
		115					120						125	
Lys	Ala	Gln	Leu	Glu	Val	Gly	Phe	Pro	Pro	Val	Met	Glu	Arg	Tyr
														Thr
			130			135					140			
Ser	Ala	Val	Ser	Met	Val	Lys	Pro	His	Met	Val	Lys	Ala	Val	Cys
														Thr
145					150					155				160
Asp	Gly	Lys	Leu	Phe	Asn	His	Leu	Glu	Thr	Ile	Trp	Arg	Phe	Ser
														Pro
				165					170					175
Gly	Ile	Pro	Ala	Tyr	Pro	Arg	Thr	Cys	Thr	Val	Asp	Phe	Ser	Ile
														Ser
			180					185					190	
Phe	Glu	Phe	Arg	Ser	Leu	Leu	His	Ser	Gln	Leu	Ala	Thr	Met	Phe
														Phe
		195					200					205		
Asp	Glu	Val	Val	Lys	Gln	Asn	Val	Ala	Ala	Phe	Glu	Arg	Arg	Ala
														Ala
			210			215					220			
Thr	Lys	Phe	Gly	Pro	Glu	Thr	Ala	Ile	Pro	Arg	Glu	Leu	Met	Phe
														His
225					230					235				240
Glu	Val	His	Gln	Thr										
					245									

<210> 5439

<211> 4234

<212> DNA

<213> Homo sapiens

<400> 5439

ggagggttctt cactcgcgac tgacggagct gcggtggcgt ctccacacgc aaccatgaag

60

ttgaaggaca caaatcaag gccaaagcag tcaagctgtg gcaaatttca gacaaagggg

120

atcaaagttg tgggaaaatg gaaggaagtg aagattgacc caaatatgtt tgcagatgga

180

cagatggatg acttggtgtg ctttgaggaa ttgacagatt accagttggt ctcccctgcc

240

aagaatccct ccagtctctt ctcaaaggaa gcacccaaga gaaaggcaca agctgtttca

300

gaagaagagg aggaggagga gggaaagtct agctcaccaa agaaaaagat caagttgaag

360

aaaagtaaaa atgtagcaac tgaaggaacc agtaccaga aagaatttga agtgaaagat

420

cctgagctgg aggcccagg agatgacatg gtttgtgatg atccggaggc tggggagatg

480

acatcagaaa acctggtcca aactgctcca aaaaagaaga aaaataaagg gaaaaaagg

540

ttggagcctt ctgagagcac tgctgccaag gtgcccacaa aagcgaagac atggattcct

600

gaagttcatg atcagaaagc agatgtgtca gcttggaagg acctgtttgt tcccaggccg

660

gttctccgag cactcagctt tctaggcttc tctgcacca caccaatcca agcctgacc

720

gtggtgtcca acgtccagga gtatcgtgag tttgtgccct ggtgtaagaa gtctctggtg
 360
 gtatccagcc gtaaggggtca tttgaaagcc cagctggagg ttggctttcc acctgtcatg
 420
 gaacgttaca cctctgcagt ttccatgggc aaacctcaca tgggtcaaggc tgtttgtact
 480
 gatggcaagc tcttcaacca cttagagact atttggcgat tcagccctgg tattcctgcc
 540
 tatcctcgaa cctgcactgt ggacttttcg atttcctttg aatttcgttc tctgctgcac
 600
 tcccagctgg ccaccatgtt ttttgatgag gttgtcaaac agaattgtgc tgcctttgag
 660
 cgtcgggcag ccaccaagtt tgggtccagaa acagccatcc cccgtgaact gatgttccat
 720
 gaggtgcacc agacttgagg caagggattg ctcctgacc tcccttctac cccacttccc
 780
 tacacaattc tcttatttat ttggtttggc tctgttcca atttgaaagg agtctgtgtt
 840
 cataatactg tttctcctct caatttccca gaaattgggt tctatgctgg ctggaaatgt
 900
 tgggggaaag agaaggcaaa ggatgtggaa atgagatgtg cttaggaaag ggtcaggccc
 960
 atcgtaggag caccatatgc ctgcagcctt ttcactacga attagaataa ggactatgtg
 1020
 gttgtctctg gaccttatca agacacctta gtgtctgacc aggggacgat agtaactttt
 1080
 ctaaggattg aataaattga gcttttcttc tggcacagag gtactgagtg gtaagtaact
 1140
 tttaccctgc ctgagattcc tcaggagaaa aggcaacctg cctccagcct gaaatacata
 1200
 aagcctcatt ttaagactgt aagtccatgc tgcctggcta ctagagagca aggggctttc
 1260
 ttaccaccag tgctgaggag aaaagtactg aacggaaaac gagttgtctt tgtactcttg
 1320
 agttgtacct tattcttcca cttggcctga gttttataa aatttcaata aattgtgaca
 1380
 gtgtgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1422

<210> 5438

<211> 245

<212> PRT

<213> Homo sapiens

<400> 5438

Phe Arg Gly Gly Val Leu Tyr Trp Asp Ala Gly Ala Ala Gly Thr
 1 5 10 15
 Gly Ser Asn His Ala Leu Gly Ala Asn Val Glu Leu Trp Ile Met Leu
 20 25 30
 Leu Gln Val Val Arg Glu Gly Lys Phe Ser Gly Phe Leu Thr Ser Cys
 35 40 45
 Ser Leu Leu Leu Pro Arg Ala Ala Gln Ile Leu Ala Ala Glu Ala Gly
 50 55 60
 Leu Pro Ser Ser Arg Ser Phe Met Gly Phe Ala Ala Pro Phe Thr Asn

tcctccctt tctctaacc catctccctc ccaggctcat ggtttctgtt gcaatcctct
 300
 ttctccttac acaaggcaag aagttttctt accaatagat cagacctgtg aaggactgcc
 360
 cgacatgata tgatatgggt gttcttcatt ttgggctgta gtattttaaa gtagagggtt
 420
 gctctgatgg tcccatcact gcttgccatt gtctttccct ttgctctagc tatcagggga
 480
 tggtgcttta agtttgctcc ccaggcttta ctgccaagag ggaaattcat acccacttta
 540
 acaagggtgtg aagcttatct tacagttgct aatgcctcac tgaccttttg gaaagggtcat
 600
 agttaccctt cagcgt
 617

<210> 5436

<211> 119

<212> PRT

<213> Homo sapiens

<400> 5436

Met	Asn	Phe	Pro	Leu	Gly	Ser	Lys	Ala	Trp	Gly	Thr	Asn	Leu	Lys	Gln
1				5				10						15	
His	Pro	Leu	Ile	Ala	Arg	Ala	Lys	Gly	Lys	Thr	Met	Ala	Ser	Ser	Asp
		20					25						30		
Gly	Thr	Ile	Arg	Ala	Asn	Leu	Tyr	Phe	Lys	Ile	Leu	Gln	Pro	Lys	Met
	35					40					45				
Lys	Asn	Asn	His	Ile	Arg	Ser	Cys	Arg	Ala	Val	Leu	His	Arg	Ser	Asp
	50					55				60					
Leu	Leu	Val	Arg	Lys	Leu	Leu	Ala	Leu	Cys	Lys	Glu	Lys	Glu	Asp	Cys
65					70				75					80	
Asn	Arg	Asn	His	Glu	Pro	Gly	Arg	Glu	Met	Gly	Leu	Glu	Lys	Gly	Glu
			85					90						95	
Glu	Asn	Trp	Met	Ser	Asp	Ile	Ser	Glu	Thr	Gln	Asp	Pro	Phe	Leu	Gln
		100						105					110		
Tyr	Tyr	Ser	Thr	Ile	Val	Met									
															115

<210> 5437

<211> 1422

<212> DNA

<213> Homo sapiens

<400> 5437

ttccgcggtg gaggggtgct atactgggat gcaggcgcgg cggggactgg cagcaatcat
 60
 gccctgggag ctaacgtaga gctttggata atgcttttgc aagttgtacg agaaggggaag
 120
 ttctcggggt ttctgacctc ctgcagcctc ctcttgctc gggtgcca gatcttgccg
 180
 gctgaggctg gcttaccttc gagccgttcc ttcatgggat ttgctgctcc cttaccaaac
 240
 aagcgaaagg cttactcgga gcgtagaatc atgggggtact caatgcagga gatgtatgag
 300

<400> 5433

gatctaacca acctccacta ctcgacaccc ctgccagcct ccctggacac caccgaccac
60
cactttggca gtatgagtgt ggggaatagt gtgaacaaca tcccagctgc tatgaccac
120
ctgggtataa gaagctcctc tgggtctccag agttctcgga gtaaccctc catccaagcc
180
acgtcaata agactgtgct ttcctcttcc ttaaataacc acccacagac atctgttccc
240
aacgcatctg ctcttcaccc ttcgctccgt ctgttttccc ttagcaaccc atctctttcc
300
accacaaacc tgagcggccc gtctcggcgt cggcagcctc ccgtcagccc tctcagcgt
360
tctcctggcc ctgaagcaca tcaag
385

<210> 5434

<211> 128

<212> PRT

<213> Homo sapiens

<400> 5434

Asp	Leu	Thr	Asn	Leu	His	Tyr	Ser	Thr	Pro	Leu	Pro	Ala	Ser	Leu	Asp
1				5					10					15	
Thr	Thr	Asp	His	His	Phe	Gly	Ser	Met	Ser	Val	Gly	Asn	Ser	Val	Asn
			20					25					30		
Asn	Ile	Pro	Ala	Ala	Met	Thr	His	Leu	Gly	Ile	Arg	Ser	Ser	Ser	Gly
		35				40						45			
Leu	Gln	Ser	Ser	Arg	Ser	Asn	Pro	Ser	Ile	Gln	Ala	Thr	Leu	Asn	Lys
	50				55					60					
Thr	Val	Leu	Ser	Ser	Ser	Leu	Asn	Asn	His	Pro	Gln	Thr	Ser	Val	Pro
65				70					75					80	
Asn	Ala	Ser	Ala	Leu	His	Pro	Ser	Leu	Arg	Leu	Phe	Ser	Leu	Ser	Asn
			85					90					95		
Pro	Ser	Leu	Ser	Thr	Thr	Asn	Leu	Ser	Gly	Pro	Ser	Arg	Arg	Arg	Gln
			100					105					110		
Pro	Pro	Val	Ser	Pro	Leu	Thr	Leu	Ser	Pro	Gly	Pro	Glu	Ala	His	Gln
			115				120						125		

<210> 5435

<211> 617

<212> DNA

<213> Homo sapiens

<400> 5435

ctcacacctg taatcacagc actttgggag gctgaggtgt gagccactgc tcttggttg
60
aaacagataa ttctttatat tcaacctgtt gtcaaaattt ttagaaacat tttccagtt
120
ccttgataa gtatactttg tataacttct ggcaaaccat aattatgaac tcacattact
180
atagtactat aatactgcag aaagggatct tgcgtttcag aaatgtcact catccagttt
240

```
<210> 5433
<211> 385
<212> DNA
<213> Homo sapiens
```


	35					40					45				
Leu	Arg	Ser	Met	Glu	Leu	Glu	Ser	Val	Gly	Met	Gly	Gly	Ala	Ala	Ala
	50					55					60				
Phe	Arg	Glu	Val	Arg	Val	Gln	Ser	Val	Val	Val	Glu	Phe	Leu	Leu	Thr
65					70					75					80
His	Val	Asp	Val	Leu	Phe	Ser	Asp	Thr	Phe	Thr	Ser	Ala	Gly	Leu	Asp
				85					90					95	
Pro	Ala	Gly	Arg	Cys	Leu	Leu	Pro	Arg	Pro	Lys	Ser	Leu	Ala	Gly	Ser
				100				105					110		
Cys	Pro	Ser	Thr	Arg	Leu	Leu	Thr	Leu	Glu	Glu	Ala	Gln	Ala	Arg	Thr
		115					120					125			
Gln	Gly	Arg	Leu	Gly	Thr	Pro	Thr	Glu	Pro	Thr	Thr	Pro	Lys	Ala	Pro
	130					135					140				
Ala	Ser	Pro	Ala	Glu	Arg	Arg	Lys	Gly	Glu	Arg	Gly	Glu	Lys	Gln	Arg
145					150					155					160
Lys	Pro	Gly	Gly	Ser	Ser	Trp	Lys	Thr	Phe	Phe	Ala	Leu	Gly	Arg	Gly
				165					170					175	
Pro	Ser	Val	Pro	Arg	Lys	Lys	Pro	Leu	Pro	Trp	Leu	Gly	Gly	Thr	Arg
			180					185					190		
Ala	Pro	Pro	Gln	Pro	Ser	Gly	Ser	Arg	Pro	Asp	Thr	Val	Thr	Leu	Arg
		195					200					205			
Ser	Ala	Lys	Ser	Glu	Glu	Ser	Leu	Ser	Ser	Gln	Ala	Ser	Gly	Ala	Gly
	210					215					220				
Leu	Gln	Arg	Leu	His	Arg	Leu	Arg	Arg	Pro	His	Ser	Ser	Ser	Asp	Ala
225					230					235					240
Phe	Pro	Val	Gly	Pro	Ala	Pro	Ala	Gly	Ser	Cys	Glu	Ser	Leu	Ser	Ser
				245					250					255	
Ser	Ser	Ser	Ser	Glu	Ser	Ser	Ser	Ser	Glu	Ser	Ser	Ser	Ser	Ser	Ser
			260					265					270		
Glu	Ser	Ser	Ala	Ala	Gly	Leu	Gly	Ala	Leu	Ser	Gly	Ser	Pro	Ser	His
		275					280					285			
Arg	Thr	Ser	Ala	Trp	Leu	Asp	Asp	Gly	Asp	Glu	Leu	Asp	Phe	Ser	Pro
	290					295					300				
Pro	Arg	Cys	Leu	Glu	Gly	Leu	Arg	Gly	Leu	Asp	Phe	Asp	Pro	Leu	Thr
305					310					315					320
Phe	Arg	Cys	Ser	Ser	Pro	Thr	Pro	Gly	Asp	Pro	Ala	Pro	Pro	Ala	Ser
				325					330					335	
Pro	Ala	Pro	Pro	Ala	Pro	Ala	Ser	Ala	Phe	Pro	Pro	Arg	Val	Thr	Pro
			340					345					350		
Gln	Ala	Ile	Ser	Pro	Arg	Gly	Pro	Thr	Ser	Pro	Ala	Ser	Pro	Ala	Ala
	355						360					365			
Leu	Asp	Ile	Ser	Glu	Pro	Leu	Ala	Val	Ser	Val	Pro	Pro	Ala	Val	Leu
	370					375					380				
Glu	Leu	Leu	Gly	Ala	Gly	Gly	Ala	Pro	Ala	Ser	Ala	Thr	Pro	Thr	Pro
385					390					395					400</

tcacaggttc ctacccccgg cttcttctcc ccagcccccga gggagtgcct gccacccttc
 1860
 ctcggggtcc ccaagccagg cttgtacccc ctgggcccccc catccttcca gccagttcc
 1920
 ccagccccag tctggaggag ctctctgggc cccctgcac cactcgacag gggagagaa
 1980
 ctgtactatg agatcggggc aagtgagggg tccccctatt ctggcccccac ccgtcctgg
 2040
 agtccctttc gctccatgcc ccccgacagg ctcaatgcct cctacggcat gcttggccaa
 2100
 tcacccccac tccacaggtc ccccgacttc ctgctcagct acccgccagc cccctcctgc
 2160
 tttccccctg accaccttgg ctactcagcc ccccgacacc ctgctcggcg ccctacaccg
 2220
 cctgagcccc tctacgtcaa cctagctcta gggcccaggg gtccctcacc tgctcttcc
 2280
 tcctcctctt cccctcctgc ccacccccga agccgttcag atcccggtcc ccagtcctcc
 2340
 cgccttcccc agaaacaacg ggcaccctgg ggaccccgta cccctcatag ggtgccgggt
 2400
 ccctggggcc ctcttgagcc tctcctgctc tacagggcag ccccgccagc ctacggaagg
 2460
 gggggcgagc tccaccgagg gtccttgtac agaaatggag ggcaaagagg ggagggggct
 2520
 ggtcccccac ccccttacc cactcccagc tggctccctcc actctgaggg ccaagaccga
 2580
 agctactgct gagcaccagc tgggaggggc cgtccttctt tcccttcacc ctactggat
 2640
 cttggcccaa ccaaaccct tgttttgtat tttcttgaac cccgaccact accccaggtt
 2700
 tctaactttg taacttgctt ctgatgtggg tccctaacct ataatctcag cttccctacc
 2760
 ctggactgaa ggggtctgcc atccccccac caccctccat cctggggggc ctgcacaaa
 2820
 tctgggggtg gaggggctag gctgacccca tcctcctctc cctccaggag ccccagcat
 2880
 gtcctgacct gtgcacgggg atgggggggac aactcctacc cttctttccc cacatgcccc
 2940
 actaaaccat ctgacaacat taatgaataa aatggtgaaa atgtgaaaaa aaaaaaaaaa
 3000
 aaaaa
 3005

<210> 5432

<211> 863

<212> PRT

<213> Homo sapiens

<400> 5432

Xaa	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg	Thr	Leu
1				5				10						15	
Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser	Ala	Asn
			20					25					30		
Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro	Asn	Leu

ggcgcggcgg cgttccggga agttcgggtg cagtcgggtg tggaggagtt tctgctcacc
240
catgtggacg tctgttcag cgacaccttc acctccgccg gcctcgaccc tgcaggccgc
300
tgcctgctcc ccaggcccaa gtcccttgcg ggcagctgcc cctccaccg cctgctgacg
360
ctggaggaag cccaggcacg caccaggggc cggtgggga cggccacgga gccacaact
420
cccaaggccc cggcctcacc tgcggaaagg aggaaagggg agagagggga gaagcagcgg
480
aagccagggg gcagcagctg gaagacgttc ttgactgg gccggggccc cagtgtccct
540
cgaaagaagc cctgccctg gctggggggc acccgtgcc caccgcagcc ttcaggcagc
600
agaccgaca ccgtcacact gagatctgcc aagagcgagg agtctctgtc atcgaggcc
660
agcggggctg gcctccagag gctgcacagg ctgcggcgac cccactccag cagcgacgt
720
ttccctgtgg gccagcacc tctgggtcc tgcgagagcc tgtcctcgtc ctccctctcc
780
gagtcctct cctctgagtc ctccctctcc tctctgagt cctcagcagc tgggctgggg
840
gcactctctg ggtctccctc acaccgtacc tcagcctggc tagatgatgg tgatgagctg
900
gacttcagcc caccgcgtg cctggaggga ctccgggggc tggactttga tcccttaacc
960
ttccgctgca gcagccccc cccaggggat cccgcacctc ccgccagccc agcacccccc
1020
gcccctgcct ctgccttccc acccaggggtg acccccagg ccatctcgcc ccggggggccc
1080
accagccccg cctgcctgc tgccttagac atctcagagc ccctggctgt atcagtgcc
1140
cccgtgtcc tagaactgct gggggctggg ggagcacctg cctcagccac cccaacacca
1200
gctctcagcc ccggccggag cctgcgcccc catctcatac ccctgctgct gcgaggagcc
1260
gaggccccgc tgaactgacg ctgccagcag gagatgtgca gcaagctccg gggagcccag
1320
ggcccactcg gtccatgat ggagtcacca ctgccacccc ctccctgtc tctcctgcgc
1380
cctgggggtg cccaccccc gcccctaag aaccagcac gcctcatggc cctggccctg
1440
gctgagcggg ctcagcaggt ggccgagcaa cagagccagc aggagtgtgg gggaccccca
1500
cctgttccc aatccccctt ccaccgctcg ctgtctctgg aggtgggcgg ggagcccctg
1560
gggacctcag ggagtgggccc acctcccaac tccctagcac acccgggtgc ctgggtcccc
1620
ggacccccac cctacttacc aaggcaacaa agtgatggga gcctgctgag gagccagcgg
1680
cccatgggga cctcaaggag gggactccga ggccctgccc aggtcagtg gcagctcagg
1740
gcaggtggcg ggggcaggga tgcgccagag gcagcagccc agtcccatg ttctgtcccc
1800

ccggcgggcg gcaaggctcc gggccagcat gggggcttcg tggtagactgt caagcaagag
 60
 cgcggcgagg gtccacgcgc gggcgagaag ggggtcccacg aggaggaggt gagagtcctt
 120
 gcgctgagct gggggaggcc ccgggctccc gcccagcct cgaagccccg cccagggctg
 180
 gatttgaatt gcttgtggct ccgcccacag cccattttcc tctggaagct gagaccccg
 240
 ccggtgccag ctgccacgcc cctgacaggt cctctgccac tctaagtcca ggccccgccc
 300
 accgcacaat gccagctctg ccactctaa ggtcccgccc acttccactc cttgggggcg
 360
 gcaccctccc cttggtcctg tggggccggt ctccagcaga aaaccacgcc caccaagcag
 420
 agggcacgcc cacaaccgaa gtcaacgcca accctgtact caaacctcgg cccatagttc
 480
 ctcagatccc ctcaccctg gccagggatc cctctaacc accgtgtccc gactgctgac
 540
 cgggccctac ctccatcttt tccgggttct tctcccagc taggccccgc ccccatcccc
 600
 gcccatacgc gt
 612

<210> 5430

<211> 94

<212> PRT

<213> Homo sapiens

<400> 5430

Pro	Ala	Gly	Gly	Lys	Ala	Pro	Gly	Gln	His	Gly	Gly	Phe	Val	Val	Thr
1				5				10					15		
Val	Lys	Gln	Glu	Arg	Gly	Glu	Gly	Pro	Arg	Ala	Gly	Glu	Lys	Gly	Ser
		20					25					30			
His	Glu	Glu	Glu	Val	Arg	Val	Pro	Ala	Leu	Ser	Trp	Gly	Arg	Pro	Arg
	35					40					45				
Ala	Pro	Ala	Pro	Ala	Ser	Lys	Pro	Arg	Pro	Arg	Leu	Asp	Leu	Asn	Cys
	50					55					60				
Leu	Trp	Leu	Arg	Pro	Gln	Pro	Ile	Phe	Leu	Trp	Lys	Leu	Arg	Pro	Arg
65				70				75						80	
Pro	Val	Pro	Ala	Ala	Thr	Pro	Leu	Thr	Gly	Pro	Leu	Pro	Leu		
				85				90							

<210> 5431

<211> 3005

<212> DNA

<213> Homo sapiens

<400> 5431

nngcacgatg tcattccagca gctgccccca ccacattaca ggaccctgga gtacctgctg
 60
 aggcacctgg cccgcgatgg gagacacagt gccaacacca gcatgcatgc ccgcaacctg
 120
 gccattgtct gggcacccaa cctgctacgg tccatggagc tggagtcagt ggggaatgggt
 180


```

<400> 5426
Pro Gln Leu Cys His Gly Leu Val Gly Ser Trp Pro Ala Cys Ser Ala
 1              5              10              15
Pro Ser Cys Ala Pro Ala Leu Leu Gly Ser Gly Cys Gly Ser Gly Glu
 20              25              30
Ser Cys Asp Arg Gly Cys Leu Ala Ala Ile Leu Ala Ser Thr Ser Ala
 35              40              45
Thr Gln Ala Arg Met Cys Pro Val Leu Arg Cys Cys Ser Glu Phe Ile
 50              55              60
Glu Ala Xaa Gly Val Val Asp Gly Ile Tyr Arg Leu Ser Gly Val Ser

```

65					70					75				80	
Ala	Ser	Thr	Pro	Gln	Ser	Gln	Cys	Leu	Pro	Ser	Glu	Ile	Glu	Val	Lys
				85					90					95	
Tyr	Lys	Met	Ala	Glu	Cys	Tyr	Thr	Met	Leu	Lys	Gln	Asp	Lys	Asp	Ala
			100					105					110		
Ile	Ala	Ile	Leu	Asp	Gly	Ile	Pro	Ser	Arg	Gln	Arg	Thr	Pro	Lys	Ile
		115				120						125			
Asn	Met	Met	Leu	Ala	Asn	Leu	Tyr	Lys	Lys	Ala	Gly	Gln	Glu	Arg	Pro
	130					135					140				
Ser	Val	Thr	Ser	Tyr	Lys	Glu	Val	Leu	Arg	Gln	Cys	Pro	Leu	Ala	Leu
145					150					155				160	
Asp	Ala	Ile	Leu	Gly	Leu	Leu	Ser	Leu	Ser	Val	Lys	Gly	Ala	Glu	Val
			165					170						175	
Ala	Ser	Met	Thr	Met	Asn	Val	Ile	Gln	Thr	Val	Pro	Asn	Leu	Asp	Trp
			180					185					190		
Leu	Ser	Val	Trp	Ile	Lys	Ala	Tyr	Ala	Phe	Val	His	Thr	Gly	Asp	Asn
	195					200					205				
Ser	Arg	Ala	Ile	Ser	Thr	Ile	Cys	Ser	Leu	Glu	Lys	Lys	Ser	Leu	Leu
	210				215						220				
Arg	Asp	Asn	Val	Asp	Leu	Gly	Ser	Leu	Ala	Asp	Leu	Tyr	Phe	Arg	
225					230				235					240	
Ala	Gly	Asp	Asn	Lys	Asn	Ser	Val	Leu	Lys	Phe	Glu	Gln	Ala	Gln	Met
			245					250						255	
Leu	Asp	Pro	Tyr	Leu	Ile	Lys	Gly	Met	Asp	Val	Tyr	Gly	Tyr	Leu	Leu
		260						265					270		
Ala	Arg	Glu	Gly	Arg	Leu	Glu	Asp	Val	Glu	Asn	Leu	Gly	Cys	Arg	Leu
	275					280						285			
Phe	Asn	Ile	Ser	Asp	Gln	His	Ala	Glu	Pro	Trp	Val	Val	Ser	Gly	Cys
	290				295					300					
His	Ser	Phe	Tyr	Ser	Lys	Arg	Tyr	Ser	Arg	Ala	Leu	Tyr	Leu	Gly	Ala
305					310					315				320	
Lys	Ala	Ile	Gln	Leu	Asn	Ser	Asn	Ser	Val	Gln	Ala	Leu	Leu	Leu	Lys
			325					330						335	
Gly	Ala	Ala	Leu	Arg	Asn	Met	Gly	Arg	Val	Gln	Glu	Ala	Ile	Ile	His
		340					345						350		
Phe	Arg	Glu	Ala	Ile	Arg	Leu	Ala	Pro	Cys	Arg	Leu	Asp	Cys	Tyr	Glu
	355					360						365			
Gly	Leu	Ile	Glu	Cys	Tyr	Leu	Ala	Ser	Asn	Ser	Ile	Arg	Glu	Ala	Met
	370					375					380				
Val	Met	Ala	Asn	Asn	Val	Tyr	Lys	Thr	Leu	Gly	Ala	Asn	Ala	Gln	Thr
385				390						395				400	
Leu	Thr	Leu	Leu	Ala	Thr	Val	Cys	Leu	Glu	Asp	Pro	Val	Thr	Gln	Glu
			405					410						415	
Lys	Ala	Lys	Thr	Leu	Leu	Asp	Lys	Ala	Leu	Thr	Gln	Arg	Pro	Asp	Tyr
		420					425					430			
Ile	Lys	Ala	Val	Val	Lys	Lys	Ala	Glu	Leu	Leu	Ser	Arg	Glu	Gln	Lys
	435					440						445			
Tyr	Glu	Asp	Gly	Ile	Ala	Leu	Leu	Arg	Asn	Ala	Leu	Ala	Asn	Gln	Ser
	450				455					460					
Asp	Cys	Val	Leu	His	Arg	Ile	Leu	Gly	Asp	Phe	Leu	Val	Ala	Val	Asn
465				470					475					480	
Glu	Tyr	Gln	Glu	Ala	Met	Asp	Gln	Tyr	Ser	Ile	Ala	Leu	Ser	Leu	Asp
			485					490					495		
Pro	Asn	Asp	Gln	Lys	Ser	Leu	Glu	Gly	Met	Gln	Lys	Met	Glu	Lys	Glu

gccctgaccc aaaggccaga ttacattaag gctgtggtga aaaaagcaga actacttagc
 1380
 agagaacaga aatatgaaga tggaattgct ttgctgagga acgcactggc taatcagagt
 1440
 gactgtgtcc tgcacgcat cctaggagat ttcctttag ctgtcaatga gtatcaggag
 1500
 gcaatggacc agtatagtat agcactaagt ttggacccca atgaccagaa gtctctagag
 1560
 gggatgcaga agatggagaa ggaggagagt cccacggatg ccactcagga ggaggatgtg
 1620
 gacgacatgg aagggagtg ggaagaagg gacctggagg gcagcgacag tgaggcggcc
 1680
 cagtgggctg accaggagca gtggttcggc atgagtgagg gggcggcagc tccatggccg
 1740
 cagtggcctg ccctgctctg agcacttccg tggactgaag gaaccgtagg agcctgctct
 1800
 cagaaggaca atgattcagc atgtgattgc agcaggggtc tctgccccct cgctcccaat
 1860
 tcctagtctg gacttcattt ctaaaacaga gcctgaccaa ccttccatgt atctccatcc
 1920
 tcccctgctc cagccagggg ggactgaggg agtgccccga gaccacgca catgttgggg
 1980
 cttctggggc aagagtactt tttatataac taatttctaa atccaaaagc tcaaggaata
 2040
 gacagtgttc tgtgacatgg attggtttga aggagttacc caccatccca gcacgataat
 2100
 gtcactctcc aagttggatg gcagcacgat ctggccctag ggagcttctt gttcccagaa
 2160
 gtcattgtcc tgggctatcc agatgtccct agtaaactct gcttccttct gcaatgttag
 2220
 taatgcctta agctgacagt tgctattttg cagaacagtt ttcctctttg ctagctagt
 2280
 aacttgctc tgagcctggg ctgatctgag aaacaggtgt gacaagagca tgaaccagag
 2340
 gtgcacctgg ggcagttccc taataaaact ggtttgtaca gtcatggtgt tggggtgac
 2400
 agaatggaag cccttttcaa aataaaa
 2427

<210> 5424

<211> 570

<212> PRT

<213> Homo sapiens

<400> 5424

Met	Ala	Ala	Gly	Leu	His	Ser	Asn	Val	Arg	Leu	Leu	Ser	Ser	Leu
1			5					10				15		
Leu	Leu	Thr	Met	Ser	Asn	Asn	Asn	Pro	Glu	Leu	Phe	Ser	Pro	Pro
			20					25				30		Gln
Lys	Tyr	Gln	Leu	Leu	Val	Tyr	His	Ala	Asp	Ser	Leu	Phe	His	Asp
		35				40					45			Lys
Glu	Tyr	Arg	Asn	Ala	Val	Ser	Lys	Tyr	Thr	Met	Ala	Leu	Gln	Gln
	50					55				60				Lys
Lys	Ala	Leu	Ser	Lys	Thr	Ser	Lys	Val	Arg	Pro	Ser	Thr	Gly	Asn
														Ser

260
Ala Arg Glu Met
275

265

270

<210> 5423
<211> 2427
<212> DNA
<213> Homo sapiens

<400> 5423
nccgcggctt tgcagagcag gatgaatgtg atagaccacg tgcgggacat ggcgggccgcg
60
gggctgcact ccaacgtgcg gctcctcagc agcttggttac ttacaatgag taataacaac
120
cctgagttat tctccccacc tcagaagtac cagcttttgg tgtatcatgc agattctctc
180
tttcatgata aggaatatcg gaatgctgtg agtaagtata ccatggcttt acagcagaag
240
aaagcgctaa gtaaaacttc aaaagtgaga ccttcaactg gaaattctgc atctactcca
300
caaagtcagt gtcttccatc tgaaattgaa gtgaaataca aaatggctga atgttataca
360
atgctaaaac aagataaaga tgccattgct atacttgatg ggatcccttc aagacaaaga
420
actcccaaaa taaacatgat gctggcaaac ctgtacaaga aggctggtca ggagcgccct
480
tcagtcacca gctataagga ggtgctgagg cagtgcccat tagcccttga tgccattcta
540
ggcttggtgt ccctttctgt aaaaggggca gaggtggcat ccatgacaat gaatgtgatc
600
caaaccgtgc ctaacttgga ctggctctct gtgtggatca aagcgatgc ttttgtgcac
660
actggtgaca actcaagagc aatcagtacc atctgttcac tagagaaaaa atccttattg
720
cgagataacg tggacctatt ggggaagcttg gcagatctgt acttcagagc tggagacaat
780
aaaaactctg tcctcaagtt tgaacaggca cagatgttgg atccttatct gataaaagga
840
atggatgtat atggctacct actggcacga gaagggcggc tagaggatgt tgagaacctt
900
ggatgccgcc ttttcaatat ctctgatcag catgcagaac cgtgggtggt ttctggctgt
960
cacagcttct atagcaaacy ctactcccg ggcctctatt taggagccaa ggccattcag
1020
ctgaacagta atagtgttca agctctgcta ctttaaggag cagcacttag gaacatgggc
1080
agagtccaag aagcaataat ccactttcgg gaggccatac ggctcgcacc ttgtcgctta
1140
gattgttatg aaggtcttat cgaatgttac ttagcctcca acagtattcg agaagcaatg
1200
gtaatggcta acaacgttta caaaactctg ggagcaaatz cacagacctt taccctttta
1260
gccaccgttt gtcttgaaga ccagtgaca caggagaaag ccaaaacatt attagataaa
1320

atcccccttcc ccagcttctc gtcggggctg gccttgtgtc tgcctcctc tatgccaccg
 900
 cccttgttct ctggccctc taccagttcg atgagaagta tggcgccag cctcggcgct
 960
 cgagagatgt aagctgcagc cgcagccatg cctactacgt gtgtgcctgg gaccgccgac
 1020
 tggctgtggc catcctgacg gccatcaacc tactggcgta tgtggctgac ctggtgcact
 1080
 ctgcccacct ggtttttgtc aaggtttaag actctcccaa gaggtcccg ttccctctcc
 1140
 aacctctttg ttcttgttgc ccgagtttcc tttatggagt acttctttcc cccgcctttc
 1200
 gtctgttttc cttttctgt ctccctccc ttcacgcgt
 1239

<210> 5422

<211> 276

<212> PRT

<213> Homo sapiens

<400> 5422

Met	Pro	Val	Thr	Val	Thr	Arg	Thr	Thr	Ile	Thr	Thr	Thr	Thr	Ser
1				5					10					15
Ser	Ser	Gly	Leu	Gly	Ser	Pro	Met	Ile	Val	Gly	Ser	Pro	Arg	Ala
			20					25					30	Leu
Thr	Gln	Pro	Leu	Gly	Leu	Leu	Arg	Leu	Leu	Gln	Leu	Val	Ser	Thr
			35				40					45		Cys
Val	Ala	Phe	Ser	Leu	Val	Ala	Ser	Val	Gly	Ala	Trp	Thr	Gly	Ser
			50				55				60			Met
Gly	Asn	Trp	Ser	Met	Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Val	Thr
					70					75				80
Ile	Ile	Leu	Ile	Val	Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro
				85				90					95	Leu
Ser	Trp	Arg	Asn	Phe	Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu
			100					105					110	Phe
Cys	Leu	Ser	Ala	Ser	Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe
			115				120					125		Leu
Ser	His	Gly	Arg	Ser	Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe
			130			135				140				Ser
Cys	Ile	Ala	Cys	Val	Ala	Tyr	Ala	Thr	Glu	Val	Ala	Trp	Thr	Arg
					150					155				160
Arg	Pro	Gly	Glu	Ile	Thr	Gly	Tyr	Met	Ala	Thr	Val	Pro	Gly	Leu
				165				170					175	Leu
Lys	Val	Leu	Glu	Thr	Phe	Val	Ala	Cys	Ile	Ile	Phe	Ala	Phe	Ile
			180					185					190	Ser
Asp	Pro	Asn	Leu	Tyr	Gln	His	Gln	Pro	Ala	Leu	Glu	Trp	Cys	Val
			195			200					205			Ala
Val	Tyr	Ala	Ile	Cys	Phe	Ile	Leu	Ala	Ala	Ile	Ala	Ile	Leu	Leu
			210			215					220			Asn
Leu	Gly	Glu	Cys	Thr	Asn	Val	Leu	Pro	Ile	Pro	Phe	Pro	Ser	Phe
					230					235				240
Ser	Gly	Leu	Ala	Leu	Cys	Leu	Ser	Ser	Ser	Met	Pro	Pro	Pro	Leu
				245					250					255
Ser	Gly	Pro	Ser	Thr	Ser	Ser	Met	Arg	Ser	Met	Ala	Ala	Ser	Leu

```

      20      25      30
Arg Ser Arg Ser Arg Ser Arg Arg Tyr Arg Glu Arg Arg Tyr Gly Phe
      35      40      45
Thr Arg Arg Tyr Tyr Arg Ser Pro Ser Arg Tyr Arg Ser Arg Ser Arg
      50      55      60
Ser Arg Ser Arg Ser Arg Gly Arg Ser Tyr Cys Gly Arg Ala Tyr Ala
      65      70      75      80
Ile Ala Arg Gly Gln Arg Tyr Tyr Gly Phe Gly Arg Thr Val Tyr Pro
      85      90      95
Glu Glu His Ser Arg Trp Arg Asp Arg Ser Arg Thr Arg Ser Arg Ser
      100      105      110
Arg Thr Pro Phe Arg Leu Ser Glu Lys Asp Arg Met Glu Leu Leu Glu
      115      120      125
Ile Ala Lys Thr Asn Ala Ala Lys Ala Leu Gly Thr Thr Asn Ile Asp
      130      135      140
Leu Pro Ala Ser Leu Arg Thr Val Pro Ser Ala Lys Glu Thr Ser Arg
      145      150      155      160
Gly Ile Gly Val Ser Ser Asn Gly Ala Lys Pro Glu Lys Ser
      165      170

```

<210> 5421

<211> 1239

<212> DNA

<213> Homo sapiens

<400> 5421

```

nccagctgcc gctgctgtct ttgcttcagc cgcagtcgcc actggctgcc tgaggtgctc
60
ttacagcctg ttccaagtgt ggcttaatcc gtctccacca ccagatcttt ctccgtggat
120
tcctctgcta agaccgctgc catgccagtg acggtaaccc gcaccaccat cacaaccacc
180
acgacgtcat cttegggcct ggggtccccc atgatcgtgg ggteccctcg ggccctgaca
240
cagcccttgg gtctccttcg cctgctgcag ctggtgtcta cctgctgggc cttctcgtcg
300
gtggctagcg tgggcgcctg gacgggggcc atgggcaact ggtccatggt cacctgggtgc
360
ttctgcttct ccgtgacctt gatcctctc atcgtggagc tgtgcgggct ccaggcccg
420
ttccctctgt cttggcgcaa cttcccatc accttcgcct gctatgcggc cctcttctgc
480
ctctcggcct ccatcatcta cccaccacc tatgtccagt tcctgtccca cggccgttcg
540
cgggaccacg ccacgcgcgc caccttcttc tcctgcatcg cgtgtgtggc ttacgccacc
600
gaagtggcct ggaccgcggc ccggcccggc gagatcactg gctatatggc caccgtaccc
660
gggctgctga aggtgctgga gaccttcgtt gcctgcatca tcttcgcgtt catcagcgac
720
cccaacctgt accagcacca gccggccctg gagggtgctg tggcggtgta cgccatctgc
780
ttcatcctag cggccatcgc catcctgctg aacctggggg agtgcaccaa cgtgctaccc
840

```

	500		505		510
Gly Val Arg Lys Ser Ser Ala Leu Ala Glu Tyr Ser Arg Leu Leu Ala					
	515		520		525

<210> 5419
 <211> 989
 <212> DNA
 <213> Homo sapiens

<400> 5419
 ttttcgtcca ggagtcggag gagcaagtcc aggtcccgtt cccgaaggcg ccaccagcgg
 60
 aagtacaggc gctactcgcg gtcatactcg cggagccggg cgcgatcccg cagccgccgt
 120
 taccgagaga ggcgctacgg gttcaccagg agatactacc ggtctccttc gcggtaccgg
 180
 tcccgggtccc gtagcaggtc gcgctctcgg ggaaggctcg actgcggaag ggcgtacgcg
 240
 atcgcgcggg gacagcgcta ctacggcttt ggtcgcacag tgtacccgga ggagcacagc
 300
 agatggaggg acagatccag gacgaggctg cggagcagaa ccccttttcg cttaagtga
 360
 aaagatcgaa tggagctggt agaaatagca aaaaccaatg cagcgaaagc tctaggaaca
 420
 accaacattg acttgccagc tagtctcaga actgttcctt cagccaaaga aacaagccgt
 480
 ggaatagggt tatcaagtaa tggtgcaaag cctgaaaaat catgaatgtg gtctgcagac
 540
 attgatgaag aaaatctggt gctgtcggaa aaggtaacag aagatggaac tcgaaatccc
 600
 aatgaaaaac ctaccagca agaagcata gcttttagct ctaataattc tntagcaaa
 660
 ccaatacaaa aatcagctaa agctgccaca gaagaggcat cttcaagatc accaaaaata
 720
 gatcagaaaa aaagtccata tggactgtgg atacctatct aaaagaagaa aactgatggc
 780
 taagtttgca tgaaaactgc actttattgc aagttagtgt ttctagcatt atcccatccc
 840
 tttgagccat tcaggggtac ttgtgcattt aaaaaccaac aaaaaagat gtaaatactt
 900
 aacactcaaa tattaacatt ttaggtttct cttgcagata tgagagatag cacagatgga
 960
 ccaaagggtta tgcacagggt ggagtccttt
 989

<210> 5420
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 5420
 Phe Ser Ser Arg Ser Arg Arg Ser Lys Ser Arg Ser Arg Ser Arg Arg
 1 5 10 15
 Arg His Gln Arg Lys Tyr Arg Arg Tyr Ser Arg Ser Tyr Ser Arg Ser

65				70				75				80			
Ala	Pro	Leu	Glu	Lys	Pro	Ile	Val	Leu	Met	Lys	Pro	Arg	Glu	Glu	Gly
85				90				95							
Lys	Gly	Pro	Val	Ala	Val	Thr	Gly	Ala	Ser	Thr	Pro	Glu	Gly	Thr	Ala
100				105				110							
Pro	Pro	Pro	Pro	Ala	Ala	Pro	Ala	Pro	Pro	Lys	Gly	Glu	Lys	Glu	Gly
115				120				125							
Gln	Arg	Pro	Thr	Gln	Pro	Val	Tyr	Gln	Ile	Gln	Asn	Arg	Gly	Met	Gly
130				135				140							
Thr	Ala	Ala	Pro	Ala	Ala	Met	Asp	Pro	Val	Val	Gly	Gln	Ala	Lys	Leu
145				150				155							
Leu	Pro	Pro	Glu	Arg	Met	Lys	His	Ser	Ile	Lys	Leu	Val	Asp	Asp	Gln
165				170				175							
Met	Asn	Trp	Cys	Asp	Ser	Ala	Ile	Glu	Tyr	Leu	Leu	Asp	Gln	Thr	Asp
180				185				190							
Val	Leu	Val	Val	Gly	Val	Leu	Gly	Leu	Gln	Gly	Thr	Gly	Lys	Ser	Met
195				200				205							
Val	Met	Ser	Leu	Leu	Ser	Ala	Asn	Thr	Pro	Glu	Glu	Asp	Gln	Arg	Thr
210				215				220							
Tyr	Val	Phe	Arg	Ala	Gln	Ser	Ala	Glu	Met	Lys	Glu	Arg	Gly	Gly	Asn
225				230				235							
Gln	Thr	Ser	Gly	Ile	Asp	Phe	Phe	Ile	Thr	Gln	Glu	Arg	Ile	Val	Phe
245				250				255							
Leu	Asp	Thr	Gln	Pro	Ile	Leu	Ser	Pro	Ser	Ile	Leu	Asp	His	Leu	Ile
260				265				270							
Asn	Asn	Asp	Arg	Lys	Leu	Pro	Pro	Glu	Tyr	Asn	Leu	Pro	His	Thr	Tyr
275				280				285							
Val	Glu	Met	Gln	Ser	Leu	Gln	Ile	Ala	Ala	Phe	Leu	Phe	Thr	Val	Cys
290				295				300							
His	Val	Val	Ile	Val	Val	Gln	Asp	Trp	Phe	Thr	Asp	Leu	Ser	Leu	Tyr
305				310				315							
Arg	Leu	Trp	Asp	Leu	Gly	Cys	Lys	Cys	Lys	Ser	Asn	Ser	His	Ser	Pro
325				330				335							
Gln	Thr	Pro	Arg	Phe	Leu	Gln	Thr	Ala	Glu	Met	Val	Lys	Pro	Ser	Thr
340				345				350							
Pro	Ser	Pro	Ser	His	Glu	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Asp	Glu	Gly
355				360				365							
Thr	Glu	Tyr	Tyr	Pro	His	Leu	Val	Phe	Leu	Gln	Asn	Lys	Ala	Arg	Arg
370				375				380							
Glu	Asp	Phe	Cys	Pro	Arg	Lys	Leu	Arg	Gln	Met	His	Leu	Met	Ile	Asp
385				390				395							
Gln	Leu	Met	Ala	His	Ser	His	Leu	Arg	Tyr	Lys	Gly	Thr	Leu	Ser	Met
405				410				415							
Leu	Gln	Cys	Asn	Val	Phe	Pro	Gly	Leu	Pro	Pro	Asp	Phe	Leu	Asp	Ser
420				425				430							
Glu	Val	Asn	Leu	Phe	Leu	Val	Pro	Phe	Met	Asp	Ser	Glu	Ala	Glu	Ser
435				440				445							
Glu	Asn	Pro	Pro	Arg	Ala	Gly	Pro	Gly	Ser	Ser	Pro	Leu	Phe	Ser	Leu
450				455				460							
Leu	Pro	Gly	Tyr	Arg	Gly	His	Pro	Ser	Phe	Gln	Ser	Leu	Val	Ser	Lys
465				470				47							

gaccagagga cttatgtttt ccgggcccag agcgctgaaa tgaaggaacg agggggcaac
 1020
 cagaccagtg gcatcgactt ctttattacc caagaacgga ttgttttcct ggacacacag
 1080
 cccatcctga gcccttctat cctagaccat ctcatcaata atgaccgcaa actgcctcca
 1140
 gagtacaacc ttccccacac ttacgttgaa atgcagtcac tccagattgc tgccttcctt
 1200
 ttcacgggtct gccatgtggt gattgttgtc caggactggt tcacagacct cagtctctac
 1260
 aggctgtggg acctgggggt caagtgaag agcaacagcc actcacccca aacccaagg
 1320
 ttcttcgaga cagcagagat ggtgaagccc tccaccccat ccccagcca cgagtccagc
 1380
 agtctcatcg gctccgatga aggcaccgag tactaccccc acctagtctt cttgcagaac
 1440
 aaagctcgcc gagaggactt ctgtcctcgg aagctgcggc agatgcacct gatgattgac
 1500
 cagctcatgg cccactccca cctgcgttac aagggaactc tgtccatgtt acaatgcaat
 1560
 gtcttcccgg ggttccacc tgacttcctg gactctgagg tcaacttatt cctggtaccc
 1620
 ttcatggaca gtgaagcaga gagtgaaaac ccaccaagag caggacctgg ttccagccca
 1680
 ctcttctccc tgctgcctgg gtatcgtggc caccacagtt tccagtcctt ggtgagcaag
 1740
 ctccggagcc aagtgatgtc catggcccgg ccacagctgt cacacacgat cctcaccgag
 1800
 aagaactggt tccactacgc tgcccggatc tgggatgggg tgagaaagtc ctctgctctg
 1860
 gcagagtaca gccgctgct gccctgaggc caaggagagg aatgtcatgc aggggacctc
 1920
 ctgggtccgc agtgactgc gagggagcac agatgtccat ccccgctgg ggtggagagc
 1980
 ggcagcaggc ctgatggatg agggatcgtg gcttcccggc ccagagacat gaggtgtcca
 2040
 gggccaggcc cccaccctc agttggggct gtccggggg tgactgt
 2087

<210> 5418

<211> 528

<212> PRT

<213> Homo sapiens

<400> 5418

Met Ala Ala Ile Asp Glu Glu Gly Gly Arg Glu Ile Gly Asp Glu Val
 1 5 10 15
 Asn Ile Leu Val Lys Glu Gln Thr Gln Leu Gly Val Lys Thr Leu Met
 20 25 30
 Arg Leu Leu Lys Glu Pro Glu Lys Glu Arg Asp Ser Asp Ser Asp Phe
 35 40 45
 Ser Pro Leu Gln Gln Thr Glu Gly Cys Gln Arg Arg Asp Lys His Phe
 50 55 60
 Arg His Ala Glu Asn Pro His His Pro Leu Lys Thr Ser Ser Arg Ala

<210> 5416
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 5416
 Xaa Ser Leu Thr Glu Thr Gly Lys Glu Ala Gln Thr Lys Ala Pro Glu
 1 5 10 15
 Arg Ser Pro Arg Pro Leu Trp Phe Pro Glu Pro Gln Leu Glu Val Gly
 20 25 30
 Gly Ala Cys Ser Ala Leu Ala Gln Ser Pro Ser Glu Lys Leu Asp Pro
 35 40 45
 Ala Cys Leu Lys Pro Leu Ser
 50 55

<210> 5417
 <211> 2087
 <212> DNA
 <213> Homo sapiens

<400> 5417
 tccacgcacc tgccatgtgc caggcactaa tccagatgcc ggggatatat ttgtaaaciaa
 60
 aacctaccac cctcatggat aaagaagggtg gagagtata aaggagactg ttctagataa
 120
 catggctcaga gaagggtctct ctgaagaggt gacttttttag cagagacttg aaggagatga
 180
 gagaataagc catgccagca tctgagatga agagcattcc agacagaaag aacagcaagc
 240
 gcagaggccc tgagggtggc catatctggc gtgttcaagg agtagccata ggaggccagg
 300
 atggctgcaa ttgatgagga aggagggaga gagataggag atgaagtcaa tatattggtg
 360
 aaggaacaga cacagttagg ggtcaagact ctcatgaggt tactcaagga accagagaaa
 420
 gaacgggact cagactcaga tttctccct cttcagcaga ctgagggatg ccagcgaaga
 480
 gacaagcact tccgtcatgc agaaaacccc catcatcctc tcaaacctc cagcagagcg
 540
 gccctcttg agaagcccat cgttctcatg aagccacggg aggaggggaa ggggcctgtg
 600
 gccgtgacag gtgcctctac ccctgagggc accgccccac caccctctgc agccctgag
 660
 ccacccaagg gggagaagga ggggcagaga ccacacagc ctgtgtacca gatccagaac
 720
 cggggcatgg gcactgccgc accagcagcc atggaccctg tcgtgggtca ggccaaacta
 780
 ctgccccag agcgcagtaa gcacagcatc aagttggtgg atgaccagat gaattggtgt
 840
 gacagtgcc tgcagtacct gttggatcag actgatgtgt tgggtggttg tgcctggggc
 900
 ctccagggga caggcaagtc catggtcatg tcattgttgt cagccaacac tccagaggag
 960

<212> DNA

<213> Homo sapiens

<400> 5415

ntcagcctta cagagactgg aaaagaagcc caaaccaagg cccagagag gtcccccagg
60
ccccttttgt tccctgagcc tcagctggag gtgggggggtg cctgcagtgc gctggctcag
120
tctccttctg aaaagctgga tccagcttgt ttgaagccct tgagctgac ttagatccgg
180
cgcaggagac caacgcctgc catgctgttc cggctctcag agcactctc accagaggag
240
gaagcctccc cccaccagag agcctcagga gaggggcacc atctcaagtc gaagagaccc
300
aaccctgtg cctacacacc accttcgctg aaagctgtgc agcgattgc tgagtctcac
360
ctgcagtcta tcagcaattt gaatgagaac caggcctcag aggaggagga tgagctgggg
420
gagcttcggg agctgggtta tccaagagag gaagatgagg aggaagagga ggatgatgaa
480
gaagaggaag aagaagagga cagccaggct gaagtcctga aggtcatcag gcagtctgct
540
gggcaaaaga caacctgtgg ccagggtctg gaagggccct gggagcgccc acccctctg
600
gatgagtccg agagagatgg aggtctctgag gaccaagtgg aagaccagc actaagttag
660
cctggggagg aacctcagcg cccttcccc tctgagcctg gcacataggc acccagcctg
720
catctcccag gaggaagtgg aggggacatc gctgttcccc agaaaccac tctatcctca
780
ccctgttttg tgctcttccc ctgcctgct agggctgcgg cttctgactt ctagaagact
840
aaggctggtc tgtgtttgct tgtttgccca cctttggctg ataccagag aacctgggca
900
cttctgctcct gatgcccacc cctgccagtc attcctccat tcaccagcg ggaggtggga
960
tgtgagacag cccacattgg aaaatccaga aaaccgggaa cagggtattg cccttcacaa
1020
ttctactccc cagatcctct cccctggaca caggagaccc acagggcagg accctaagat
1080
ctggggaaaag gaggtcctga gaaccttag gtacccttag atccttttct acccacttct
1140
ctatggagga ttccaagtca ccacttctct caccggcttc taccagggtc caggactaag
1200
gcgtttttct ccatagcctc aacatttttg gaatcttccc ttaatcacc ttgctcctcc
1260
tgggtgcctg gaagatggac tggcagagac ctctttgttg cgttttgtgc tttgatgcca
1320
ggaatgccgc ctagtttatg tccccggtgg ggcacacagc gggggcgcc aggttttctc
1380
tgtccccag ctgctctgcc cctttccct tcttcctga ctccaggcct gaaccctcc
1440
cgtgctgtaa taaatctttg taaataaaaa aaaaaaaaaa aaaaaaaaaa aaa
1493

20										25					30				
Ile	Cys	Ala	Asn	Ser	Pro	Ile	Lys	Ala	Gln	Gln	Asp	Gln	Leu	Gln	Val				
35										40					45				
Lys	Asn	Asn	Ile	Lys	Ala	Ser	Leu	His	Asn	Val	Lys	Ser	Ser	Leu	Pro				
50										55					60				
Leu	Phe	Asn	Thr	Lys	Ser	Ser	Thr	Ser	Val	Gly	Gln	Leu	Gln	Ser	Pro				
65										70					75				
Thr	Leu	Asn	Ser	Pro	Ile	Tyr	Met	Gln	Lys	Gln	Gly	Lys	Asn	Glu	His				
85										90					95				
Leu	Ala	Phe	Asn	Thr	Lys	Ser	Lys	Ala	Ser	Thr	Val	Gly	Ser	Glu	Leu				
100										105					110				
Val	Leu	Val	Ser	Thr	Thr	Val	Pro	Thr	Val	His	His	Val	Ser	Asp	Leu				
115										120					125				
Glu	Met	Ser	Ser	Thr	Leu	Asp	Cys	Leu	Pro	Val	Leu	Ala	Asp	Trp	Glu				
130										135					140				
Asp	Val	Val	Leu	Leu	Pro	Ala	Ser	Gln	Pro	Glu	Glu	Asn	Val	Asp	Cys				
145										150					155				
Thr	Val	Pro	Ile	Ser	Asp	Ser	Asp	Leu	Glu	Ile	Ser	Phe	Asn	Ser	Gly				
165										170					175				
Glu	Arg	Leu	Met	Val	Leu	Lys	Glu	Leu	Glu	Met	Ser	Ser	His	Glu	Asn				
180										185					190				
Phe	Gly	Asp	Ile	Glu	Glu	Thr	Pro	Gln	Lys	Ser	Glu	Thr	Ser	Lys	Ser				
195										200					205				
Ile	Val	Tyr	Lys	Ser	Pro	His	Thr	Thr	Ile	Tyr	Asn	Val	Lys	Glu	Ala				
210										215					220				
Lys	Asp	Pro	Gly	Ser	Asp	Ile	Ser	Ala	Phe	Lys	Leu	Pro	Glu	His	Lys				
225										230					235				
Ser	Ser	Thr	Phe	Asn	Arg	Val	Asn	Ala	Asn	Met	Ser	His	Pro	Leu	Val				
245										250					255				
Leu	Gly	Lys	His	Pro	Leu	Leu	Ser	Gly	Gly	Thr	Lys	Arg	Asn	Pro	Cys				
260										265					270				
Ser	Pro	Gln	Ala	Phe	Pro	Pro	Ala	Lys	Lys	Gln	Pro	Phe	Thr	Ile	His				
275										280					285				
Glu	Glu	Lys	Pro	Thr	Ser	Ser	Asp	Cys	Ser	Pro	Val	Arg	Ser	Ser	Ser				
290										295					300				
Trp	Arg	Arg	Leu	Pro	Ser	Ile	Leu	Thr	Ser	Thr	Val	Asn	Leu	Gln	Glu				
305										310					315				
Pro	Trp	Lys	Ser	Gly	Lys	Met	Thr	Pro	Pro	Leu	Cys	Lys	Cys	Gly	Arg				
325										330					335				
Arg	Ser	Lys	Arg	Leu	Val	Val	Ser	Asn	Asn	Gly	Pro	Asn	His	Gly	Lys				
340										345					350				
Val	Phe	Tyr	Cys	Cys	Pro	Ile	Gly	Lys	Tyr	Gln	Glu	Asn	Arg	Lys	Cys				
355										360					365				
Cys	Gly	Tyr	Phe	Lys	Trp	Glu	Gln	Thr	Leu	Gln	Lys	Glu	Arg	Ala	Asn				
370										375					380				
Ser	Met	Val	Pro	Ser	His	Ser	Thr	Gly	Gly	Leu	Thr	Phe	Ser	Ser	Pro				
385										390					395				
Glu	Thr	Ser	His	Ile	Cys	Asp	Arg	Asn	Leu	Ser	Ile	Ser	Thr	Lys	Asn				
405										410					415				
Ser	Leu	Arg	Leu	Arg	Pro	Ser	Met	Arg	Asn										
420										425									

<210>	5415
<211>	1493

ataataaatc ctcataaaaa agttcaaatg aagtcaattt gtgcaaattc tcctataaaag
 420
 gcacaacagg atcaattaca agtaaaaaac aatataaaag caagtcttca caatgtcaaa
 480
 agttccttac ctcttttttaa tactaagtec tctacttctg tggggcagtt gcagtctcct
 540
 accttgaatt cacctatcta tatgcaaaag caaggaaaaa atgaacatct tgcatttaat
 600
 accaaatcta aggttcaac agttggttca gaattggtac ttgtttctac caccgttcca
 660
 actgttcac atgtttctga tttggaaatg agctctactc tggactgttt acctgtgttg
 720
 gctgattggg aggatgtggt tttactgcca gcactctcagc ctgaggaaaa cgtagactgt
 780
 acagttccca ttagtgactc agacttagag atttcattta attctggaga aagattaatg
 840
 gttttgaaag aattggaaat gtcaagtcac gaaaactttg gagacataga ggaaactcct
 900
 caaaaatctg agacttctaa gtctattgtg tacaagagtc ctcacactac tatttataat
 960
 gtaaaagaag ccaaagatcc aggttcagat atttctgcct ttaagttacc tgaacacaaa
 1020
 tcaagtacct tcaacagagt taatgccaat atgtctcacc ctttagtttt ggggaaacat
 1080
 cctcttcttt caggtggtac caaaaggaat ccatgcagtc cccaagcttt cccaccagca
 1140
 aaaaaacaac ctttactat tcatgaagaa aagcctacat catctgattg ctcccagta
 1200
 agaagttctt cctggaggcg tctcccatct atattaactt ctacagttaa cctacaagag
 1260
 ccatggaaga gtgggaaat gacacctcca ttatgcaagt gtggtcggag atctaagaga
 1320
 cttgtgttt ctaataatgg accgaaccat ggaaaagtct tctattgttg ccctatcggg
 1380
 aaataccaag aaaacagaaa atgttgtggt tatttcaa at gggaacaaac acttcaaaag
 1440
 gaaagagcca acagcatggt tccatctcat tccacagggg gactcacttt tagttctcca
 1500
 gaaacaagcc atatttgtga cagaaattta agtatttcca ccaaaaattc tttgagactc
 1560
 aggccttcaa tgaggaattg ataaccttcc atgtatgaat cctaattggt ccttgaattt
 1620
 ccaaacatga gtattctgat aacatcttac actattttat ttttatttta tatatta
 1677

<210> 5414

<211> 426

<212> PRT

<213> Homo sapiens

<400> 5414

Met	Ser	Ala	Cys	Asn	Ile	Ser	Ile	Gln	Gly	Pro	Ser	Ile	Tyr	Asn	Lys
1				5				10						15	
Glu	Pro	Lys	Asn	Ile	Ile	Asn	Pro	His	Glu	Lys	Val	Gln	Met	Lys	Ser

```

      370              375              380
Glu Gln Val Ile Asn Asn Ile Leu Glu Glu Arg Leu Ala Pro Thr Leu
385              390              395              400
Ser Gln Leu Asp Arg Asn Leu Asp Arg Glu Met Lys Pro Asp Pro Thr
      405              410              415
Pro Leu Leu Thr Ser Arg His Asn Val Phe Gln Asn Asp Glu Phe Asp
      420              425              430
Val Phe Ser Arg Asp Ser Val Asp Leu Ser Arg Val His Lys Gly Lys
      435              440              445
Ser Thr Arg Lys Glu Glu Asn Thr Arg Ser Leu Leu Asn Asp Lys Arg
      450              455              460
Ala Val Ala Ala Gln Arg Gln Arg Tyr Glu Gln Tyr Ser Val Val Val
465              470              475              480
Glu Glu Val Pro Leu Gln Pro Gly Glu Ser Leu Pro Tyr His Ser Val
      485              490              495
Tyr Tyr Glu Asp Glu Tyr Asp Asp Thr Tyr Asp Gly Asn Gln Val Gly
      500              505              510
Ala Asn Asp Ala Asp Ser Met Thr Ser Ser Ser Ala Ala Gly His Ser
      515              520              525
Pro Ser Gln Val Leu Arg Thr Lys Val Pro Arg Glu Gly Gln Glu Glu
      530              535              540
Asp Asp Asp Asp Glu Glu Asp Asp Ala Asp Glu Glu Ala Pro Lys Pro
545              550              555              560
Asp His Phe Val Gln Asp Pro Ala Val Leu Arg Glu Lys Ala Glu Ala
      565              570              575
Arg Arg Met Ala Phe Leu Ala Lys Lys Gly Tyr Arg His Asp Ser Ser
      580              585              590
Thr Ala Val Ala Gly Ser Pro Arg Gly His Gly Gln Ser Arg Glu Thr
      595              600              605
Thr Gln Glu Arg Arg Lys Lys Glu Ala Asn Lys Ala Thr Arg Ala Asn
      610              615              620
His Asn Arg Arg Thr Met Ala Asp Arg Lys Arg Ser Lys Gly Met Ile
625              630              635              640
Pro Ser

```

<210> 5413

<211> 1677

<212> DNA

<213> Homo sapiens

<400> 5413

```

agagatggtt gtgtaatgaa aattacaagg tcgttgaaca aggttagtag tgtcttgcc
60
ttttattctg tcatctcaaa cttcataaac agtcatacgt tctttgaaac gtagatttaa
120
tgtgtgcagt catttataaa tcaatgacat ttctcttttt tgtcataaaa ctgtatactg
180
aagaaattaa cgaatgcaca gtttctaaag ctgttgcat tgtctgtgga atcatagggt
240
cccactaaga agaatttcag cattctggcc agaaatttga atacaattca agttgaagaa
300
atgtctgcct gtaacattag catccagggt cccagcatat ataataagga gcctaaaaat
360

```

<210> 5412
 <211> 642
 <212> PRT
 <213> Homo sapiens

<400> 5412
 Met Gln Lys Arg Leu His Arg Ser Val Phe Leu Thr Phe Leu Arg Met
 1 5 10 15
 Ser Thr His Lys Glu Ser Lys Asp His Phe Ile Ser Pro Ser Ala Phe
 20 25 30
 Gly Glu Ile Leu Tyr Asn Asn Phe Leu Phe Asp Ile Pro Lys Ile Leu
 35 40 45
 Asp Leu Cys Val Leu Phe Gly Lys Gly Asn Ser Pro Leu Leu Gln Lys
 50 55 60
 Met Ile Gly Asn Ile Phe Thr Gln Gln Pro Ser Tyr Tyr Ser Asp Leu
 65 70 75 80
 Asp Glu Thr Leu Pro Thr Ile Leu Gln Val Phe Ser Asn Ile Leu Gln
 85 90 95
 His Cys Gly Leu Gln Gly Asp Gly Ala Asn Thr Thr Pro Gln Lys Leu
 100 105 110
 Glu Glu Arg Gly Arg Leu Thr Pro Ser Asp Met Pro Leu Leu Glu Leu
 115 120 125
 Lys Asp Ile Val Leu Tyr Leu Cys Asp Thr Cys Thr Thr Leu Trp Ala
 130 135 140
 Phe Leu Asp Ile Phe Pro Leu Ala Cys Gln Thr Phe Gln Lys His Asp
 145 150 155 160
 Phe Cys Tyr Arg Leu Ala Ser Phe Tyr Glu Ala Ala Ile Pro Glu Met
 165 170 175
 Glu Ser Ala Ile Lys Lys Arg Arg Leu Glu Asp Ser Lys Leu Leu Gly
 180 185 190
 Asp Leu Trp Gln Arg Leu Ser His Ser Arg Lys Lys Leu Met Glu Ile
 195 200 205
 Phe His Ile Ile Leu Asn Gln Ile Cys Leu Leu Pro Ile Leu Glu Ser
 210 215 220
 Ser Cys Asp Asn Ile Gln Gly Phe Ile Glu Glu Phe Leu Gln Ile Phe
 225 230 235 240
 Ser Ser Leu Leu Gln Glu Lys Arg Phe Leu Arg Asp Tyr Asp Ala Leu
 245 250 255
 Phe Pro Val Ala Glu Asp Ile Ser Leu Leu Gln Gln Ala Ser Ser Val
 260 265 270
 Leu Asp Glu Thr Arg Thr Ala Tyr Ile Leu Gln Ala Val Glu Ser Ala
 275 280 285
 Trp Glu Gly Val Asp Arg Arg Lys Ala Thr Asp Ala Lys Asp Pro Ser
 290 295 300
 Val Ile Glu Glu Pro Asn Gly Glu Pro Asn Gly Val Thr Val Thr Ala
 305 310 315 320
 Glu Ala Val Ser Gln Ala Ser Ser His Pro Glu Asn Ser Glu Glu Glu
 325 330 335
 Glu Cys Met Gly Ala Ala Ala Ala Val Gly Pro Ala Met Cys Gly Val
 340 345 350
 Glu Leu Asp Ser Leu Ile Ser Gln Val Lys Asp Leu Leu Pro Asp Leu
 355 360 365
 Gly Glu Gly Phe Ile Leu Ala Cys Leu Glu Tyr Tyr His Tyr Asp Pro

cccgtggccg aagacatcag cttgctgcag caggcctcat cagtcttggg cgagacgcgg
1260
actgcctaca tcctccaggc agtcgagagt gcatgggaag gggaggacag acggaaagcc
1320
acagatgcta aagacccatc ggtgattgag gagcctaata gggagcctaa cggggtcacg
1380
gtgacagcag aggcagtcag tcaagcatca tcacatccgg agaactcgga ggaagaggag
1440
tgcattgggag cagccgcggc tgtggggcct gccatgtgtg gggaggaaact ggactctctc
1500
atctcccaag tgaaggacct gctgccagac cttgggtgagg gcttcatcct ggctgcctg
1560
gagtactacc actacgaccc agagcaggtg atcaacaata tcctggagga gcggctggcc
1620
cccaccctca gccagctgga ccgcaaccta gacagagaaa tgaaaccaga ccctacaccc
1680
ctgctgacgt ctgccacaa cgtcttccag aatgacgagt ttgatgtgtt cagcagggac
1740
tcagtagacc tgagccgggt gcacaagggc aagagcacca ggaaggagga aaacacgcgg
1800
agtttgctga acgacaagcg tgcagtggcg gcacagcggc agcgctacga gcagtacagc
1860
gtggtggtgg aggaggtgcc actgcagcca ggcgagagcc tgccctacca cagtgtctac
1920
tacgaggatg agtacgatga cacatacgat ggcaaccagg tgggcgcca tgatgcagac
1980
tctatgacga gctcatcagc cgcaggccat tcaccatccc aggtgctgag aaccaagt
2040
cctagagaag ggcaggagga ggatgacgac gatgaggaag acgatgctga cgaggaggct
2100
cccaagcccg accattttgt tcaggacct gcagtgtgta gagagaaggc agaagccagg
2160
cgcatggcct ttctcgccaa gaaagggtag cggcatgaca gctcaacagc agtggccggc
2220
agcccccag gccatgggca gagccgcgag acaaccagg aacgcaggaa gaaggagcc
2280
aacaaggcga caagagccaa ccacaaccgg agaaccatgg ccgaccgcaa gaggagcaaa
2340
ggcatgatcc catcctgaga cctggtgcag ggccagtggg gaggcagcgg caccagactc
2400
accaggccgc gctcccatcg cctggggcct cctcactagg ggccccaagt tcaactcaac
2460
ccctcaacag cctcagcttt gcagcccctg agaaggccgc ctctcatcta ccagccagcc
2520
atgagcgctt tcctgcagaa cacacagtgc cttatgccac agccgaagaa tccgtggggc
2580
cggcaagcag gcaccttccc ccagctgcgc tagcgggaaa gagatgggga tggagtccca
2640
aggcaagcgc cccaaacctc gggccacaag acaccacttc ccctttaccc tggacagcag
2700
gaaacctgta tattcaaaaa cacaaaaagt cctgctaata aaatttttga ccctttcaaa
2760
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
2802

145		150		155		160									
Asp	Asp	Val	Phe	Asn	Cys	Asn	Leu	Ser	Pro	Arg	Ser	Ser	Leu	Thr	Glu
			165						170					175	
Pro	Leu	Leu	Ala	Glu	Leu	Pro	Phe	Pro	Ser	Val	Leu	Glu	Ser	Glu	Glu
			180					185					190		
Thr	Pro	Asn	Gln	Phe	Ile										
			195												

<210> 5411

<211> 2802

<212> DNA

<213> Homo sapiens

<400> 5411

```

nccaggtaaa tctgaggaac ttccccaagc ctttatttgc acccggtaaa tccaataata
60
ccaattttga ttttaaattgg gaggggggtc cttgcaggcc ccacatgaga ggggtggcct
120
tgaagaattc cttgggttac ccacaggctt accagtttgg aaactcgcca ccccgagcag
180
aaggcagccc ggtattttgt gttatacaaa ccgcccccta aagacaacat tcccgcccta
240
gtggaggagt acctggaacg cgccaccttc gtagccaatg acctcgactg gctcctggcc
300
ttgcctcacg ataaattctg gtgccaggtg atctttgacg agactctaca gaagtgcctg
360
gactcctacc tgcgctatgt ccccgcaaaa ttcgacgagg ggggtggcctc agcccctgag
420
gttgttgaca tgcagaagcg cctccatcga agtggttttc tcaccttctt ccgcatgtcc
480
actcacaagg aatccaaaga tcacttcatt tccccttctg cgtttgaga aatcctctac
540
aataaacttc tctttgacat tccaaagatc ctggacctct gcgtgctctt tggaaaaggc
600
aactcaccac tgctccagaa gatgatagga aacatcttta cacagcagcc aagttactac
660
agtgaacctg atgaaaccct gcctaccatc cttcagggtc tcagcaatat cctccagcac
720
tgtggtttgc aaggggacgg ggccaatacc acaccacaga agcttgagga gaggggcca
780
ttgaccccca gtgacatgcc tctcctggaa ttaaaggaca ttgttctcta cctttgtgat
840
acctgcacca cactttgggc ctttctggat atcttcctt tggcttgcca gacctccag
900
aagcacgact tttgttacag actagcttcc ttctacgaag cagcaattcc cgaaatggag
960
tctgcaatta agaagaggag gcttgaagat agcaagcttc ttggtgacct gtggcagagg
1020
ctctccatt ccaggaagaa gctaattggag attttccaca tcacctgaa ccagatctgc
1080
ctccttccca tctagaaag cagctgtgac aacattcagg gcttcatcga agagttcctt
1140
cagatcttca gctccttgct gcaggagaag aggttcctcc gggactatga tgcactcttc
1200

```

caaaagaggc tctgtcagag atgatctggg tgacagattg cagttaaaaa catcatctat
 1260
 tgaacctctg gaagttacac tgaactttcg gtcagagaaa ctgctccttc ggattaaagg
 1320
 ctcactcatt ttttccagaa ataacttaat cgtctccttc ttttctggac ttgtacttga
 1380
 caaattcaga acttttccat ttacttttac aacggaatta ctgagcccaa accaatagaa
 1440
 gaaatcaa ataatgcacag ctttgaattc atatgcaaag cttaaatttt ctccattaac
 1500
 cacttcattt cctgggggga agaaattctt cactgcctct tgaaaatcaa actgaaagag
 1560
 agaggaacat tgcattgact gaagccggta acttttctcca atcactgagg agatgaccat
 1620
 gtccatccct tgctctatct gtcttcttat cttgggggtgc ctctgttcta caagaaacgc
 1680
 gtacgtcctt tcttttgagg tgtctttttt ggtctgtaca ttaataaaga acaacattgg
 1740
 tttgtcaat atagtttccc tgtagtcttt ataatcacag tagttggtca gttccacata
 1800
 cctcttgatg tagctgctga ggcggtagag ctgcccgctg aggcgcacga ggccgtcacc
 1860
 gaagacgttg aagccccccc gcgcgcgcgc cggtcccccg ggcccggcca ccacgagctg
 1920
 gtcgcgcctc agctggaagg caccgggctg caggcgcagc agctgagcca gcggcagcag
 1980
 ggccagctcg cagtcgcagg tccacaggct gcgaagctt
 2019

<210> 5410

<211> 198

<212> PRT

<213> Homo sapiens

<400> 5410

Met	Leu	Phe	Phe	Ile	Asn	Val	Gln	Thr	Lys	Lys	Asp	Thr	Ser	Lys	Glu
1				5					10					15	
Arg	Thr	Tyr	Ala	Phe	Leu	Val	Asn	Thr	Arg	His	Pro	Lys	Ile	Arg	Arg
			20					25					30		
Gln	Ile	Glu	Gln	Gly	Met	Asp	Met	Val	Ile	Ser	Ser	Val	Ile	Gly	Glu
		35					40					45			
Ser	Tyr	Arg	Leu	Gln	Ser	Met	Gln	Cys	Ser	Ser	Leu	Phe	Gln	Phe	Asp
	50				55						60				
Phe	Gln	Glu	Ala	Val	Lys	Asn	Phe	Phe	Pro	Pro	Gly	Asn	Glu	Val	Val
65					70				75					80	
Asn	Gly	Glu	Asn	Leu	Ser	Phe	Ala	Tyr	Glu	Phe	Lys	Ala	Asp	Ala	Leu
			85					90					95		
Phe	Asp	Phe	Phe	Tyr	Trp	Phe	Gly	Leu	Ser	Asn	Ser	Val	Val	Lys	Val
			100				105					110			
Asn	Gly	Lys	Val	Leu	Asn	Leu	Ser	Ser	Thr	Ser	Pro	Glu	Lys	Lys	Glu
		115				120					125				
Thr	Ile	Lys	Leu	Phe	Leu	Glu	Lys	Met	Ser	Glu	Pro	Leu	Ile	Arg	Arg
	130				135					140					
Ser	Ser	Phe	Ser	Asp	Arg	Lys	Phe	Ser	Val	Thr	Ser	Arg	Gly	Ser	Ile

	275		280		285	
Ala	Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys Ile Met Cys Val					
	290		295		300	
Ala	Gly Ile Gly Leu Val Val Leu Phe Phe Ser Trp Met Leu Ser Ile					
305		310		315		320
Phe	Arg Ser Lys Tyr His Gly Tyr Pro Tyr Ser Phe Leu Met Ser					
	325		330			335

<210> 5409

<211> 2019

<212> DNA

<213> Homo sapiens

<400> 5409

```

ttttgaagcc tcagtcataa atttaatacaa ttctagggtg aatgctaaga aaagttttaa
60
ttgtgcaaat gtggtacata acatttcaaa tataagtgga aggatcatca gtagtggtat
120
caaaatgcat aatacagaaa ctttttaaga aaggataaaa aattacactc aggaccata
180
actcttcctc attataagca tatgtagtga ttcattcatg cagggttttta tatgtagata
240
ggattttttt ttccttttca agaattccat tgtagccatg agatgaaaaa tgtattatgg
300
taatggtata gctttcttct attttgcttt tagtgtagg tttgctaaaa gcttatttaa
360
aattcccaac tgacataatg tgttttcaat aaggaggacg ctgccgtgtc caataccctt
420
cccctgtcat tggtcggtag catatctcct ggcttccttc tacatgggtc acttagttaa
480
gagggaggcc aaggaggttc cgatttcagg cagtgtgtgg cagggttact gtccatgcaa
540
cctggctact cctcactgtg aacgtttctc atagggtgtca tatggcagga tgaaaaacat
600
atttgccctc cagtgaagaa tggcacaggc ttttgccag ccagggttggc aagagaacag
660
aactcttaac cccttgctcg acaggtttga gttcaagggg ttggatgctc caagcagagg
720
gccaaaccct gatttatgaa gcatgctagg tcaacagcca gtcagaccac tcccacaaag
780
gctgccacaa aaactcccag ggaactgaga aaaatgttca gggtaggcaga actctgtggc
840
ccttctgcct ctttgagaaa gtgttcaaag tagagaatat ccccgagcc caccagtg
900
catgggacca aggcctttcc atcctggtta tcataagttt taggggaatc agctgcctg
960
ggcctgccag ggcattcatc ccacagaagc agaagagagg agtcctccat agaagccatg
1020
gaggagccgg agattgacac gcagggtgaa gtatctgcct cccacctcct accctccccg
1080
cagcctatag tctagcacag gcctggagtg cgggagcaac tgctacaatg ttcagttcaa
1140
tcagataaat tggttgggtg tctcttcaga ttccagaaca cttggaaatg gtaattctgc
1200

```


gaatgacaat tttttgtatt tgctttttct ccctttaaga gcacattctt ctgtaaggag
 1740
 aaaggcagca ttctggctaa aatgtgtaga aggtaattta ctacacttat aaaatagtgt
 1800
 gacttttgtg aaaattttga attagctttc atatgaagtg ccttaagtag actcttcatt
 1860
 tacttttctg gtaatgggtt aaatatcatt tgttatgcat ttttaagata cagttcagaa
 1920
 tgacacattg tagtggcaaa gataaccaaa tgtctggctg tttgcttttt gaccatatca
 1980
 ataaactttt acaatctaaa aaaaaaaaaa
 2010

<210> 5408

<211> 335

<212> PRT

<213> Homo sapiens

<400> 5408

Met	Ala	Ala	Arg	Trp	Arg	Phe	Trp	Cys	Val	Ser	Val	Thr	Met	Val	Val
1			5					10					15		
Ala	Leu	Leu	Ile	Val	Cys	Asp	Val	Pro	Ser	Ala	Ser	Ala	Gln	Arg	Lys
		20					25					30			
Lys	Glu	Met	Val	Leu	Ser	Glu	Lys	Val	Ser	Gln	Leu	Met	Glu	Trp	Thr
		35				40					45				
Asn	Lys	Arg	Pro	Val	Ile	Arg	Met	Asn	Gly	Asp	Lys	Phe	Arg	Arg	Leu
50					55				60						
Val	Lys	Ala	Pro	Pro	Arg	Asn	Tyr	Ser	Val	Ile	Val	Met	Phe	Thr	Ala
65				70					75					80	
Leu	Gln	Leu	His	Arg	Gln	Cys	Val	Val	Cys	Lys	Gln	Ala	Asp	Glu	Glu
			85					90				95			
Phe	Gln	Ile	Leu	Ala	Asn	Ser	Trp	Arg	Tyr	Ser	Ser	Ala	Phe	Thr	Asn
		100					105					110			
Arg	Ile	Phe	Phe	Ala	Met	Val	Asp	Phe	Asp	Glu	Gly	Ser	Asp	Val	Phe
		115				120					125				
Gln	Met	Leu	Asn	Met	Asn	Ser	Ala	Pro	Thr	Phe	Ile	Asn	Phe	Pro	Ala
	130				135				140						
Lys	Gly	Lys	Pro	Lys	Arg	Gly	Asp	Thr	Tyr	Glu	Leu	Gln	Val	Arg	Gly
145				150					155					160	
Phe	Ser	Ala	Glu	Gln	Ile	Ala	Arg	Trp	Ile	Ala	Asp	Arg	Thr	Asp	Val
			165					170					175		
Asn	Ile	Arg	Val	Ile	Arg	Pro	Pro	Asn	Tyr	Ala	Gly	Pro	Leu	Met	Leu
		180					185					190			
Gly	Leu	Leu	Leu	Ala	Val	Ile	Gly	Gly	Leu	Val	Tyr	Leu	Arg	Arg	Ser
		195				200					205				
Asn	Met	Glu	Phe	Leu	Phe	Asn	Lys	Thr	Gly	Trp	Ala	Phe	Ala	Ala	Leu
	210				215				220						
Cys	Phe	Val	Leu	Ala	Met	Thr	Ser	Gly	Gln	Met	Trp	Asn	His	Ile	Arg
225				230					235					240	
Gly	Pro	Pro	Tyr	Ala	His	Lys	Asn	Pro	His	Thr	Gly	His	Val	Asn	Tyr
			245					250					255		
Ile	His	Gly	Ser	Gln	Ala	Gln	Phe	Val	Ala	Glu	Thr	His	Ile	Val	
		260				265					270				
Leu	Leu	Phe	Asn	Gly	Gly	Val	Thr	Leu	Gly	Met	Val	Leu	Leu	Cys	Glu

atggtggtgg cgctgctcat cgtttgcgac gttccctcag cctctgcccc aagaaagaag
120
gagatggtgt tatctgaaaa ggtagtcag ctgatggaat ggactaaca aagacctgta
180
ataagaatga atggagacaa gttccgtcgc cttgtgaaag cccaccgag aaattactcc
240
gttatcgtca tgttcaactg tctccaactg catagacagt gtgtcgtttg caagcaagct
300
gatgaagaat tccagatcct ggcaaaactcc tggcgatact ccagtgcatt caccaacagg
360
atattttttg ccatggtgga ttttgatgaa ggctctgatg tatttcagat gctaaacatg
420
aattcagctc caactttcat caactttcct gcaaaaggga aacccaaacg gggatgatac
480
tatgagttac aggtgcgggg tttttcagct gagcagattg cccggtggat cgccgacaga
540
actgatgtca atattagagt gattagacct ccaaattatg ctggtccctt tatgttggga
600
ttgcttttgg ctgttattgg tggacttgtg tatcttcgaa gaagtaatat ggaatttctc
660
tttaataaaa ctggatgggc ttttgcagct ttgtgttttg tgcttgctat gacatctggt
720
caaatgtgga accatataag aggaccacca tatgcccata agaatcccc caccggacat
780
gtgaattata tccatggaag cagtcaagcc cagttttagt ctgaaacaca cattgttctt
840
ctgtttaatg gtggagttac cttaggaatg gtgcttttat gtgaagctgc tacctctgac
900
atggatattg gaaagcgaaa gataatgtgt gtggctggta ttggacttgt tgtattatc
960
ttcagttgga tgctctctat ttttagatct aaatatcatg gctaccata cagctttctg
1020
atgagttaaa aagggtccag agatatatag acactggagt actggaaatt gaaaaacgaa
1080
aatcgtgtgt gtttgaaaag aagaatgcaa cttgtatatt ttgtattacc tcttttttc
1140
aagtgattta aatagttaat catttaacca aagaagatgt gtagtgcctt aacaagcaat
1200
cctctgtcaa aatctgaggt atttgaaaat aattatcctc ttaaccttct cttcccagtg
1260
aactttatgg aacatttaat ttagtacaat taagtatatt ataaagatac tatgactgcc
1320
acctgccatt taccttctaa taacctgcc atgtgggttg cagaaagaga tggatatagt
1380
agcctcagaa gaaatatttt atgtgggttt tttgttttct gttactagat ttcattggatg
1440
aggggatatg gttgacctt tactttttaa tggagcagcc agtttttgtt aattactcac
1500
ttgtaaattg tgagattctg aattccttac ctgctattct tgtacttgtc tcaggccaaa
1560
tctatgctgt ggttcttatg agacttgat gaagatgcc tgatttgtac agattgacca
1620
cggaataact actgccatgt aatctgtata gttccagata atttgcctg aacattgaca
1680

<210> 5406
 <211> 291
 <212> PRT
 <213> Homo sapiens

<400> 5406
 Ile Leu Ala Glu Leu Glu Ala Asn Val Pro Gly Ala Gln Val Leu Gly
 1 5 10 15
 Asn Gln Ile Met Pro Gly Phe Leu Asn Met Lys Ile Lys Phe Val Cys
 20 25 30
 Ala Gln Cys Leu Arg Asn Gly Gln Val Ile Glu Pro Asp Lys Asn Arg
 35 40 45
 Lys Tyr Cys Ser Ala Lys Ala Arg His Ser Trp Thr Lys Asp Arg Arg
 50 55 60
 Ala Met Arg Val Met Ser Ile Glu Arg Lys Lys Trp Met Asn Ile Arg
 65 70 75 80
 Pro Leu Pro Thr Lys Lys Gln Met Pro Leu Gln Phe Asp Leu Cys Asn
 85 90 95
 His Ile Ala Ser Gly Lys Lys Cys Gln Tyr Val Gly Asn Cys Ser Phe
 100 105 110
 Ala His Ser Pro Glu Glu Arg Glu Val Trp Thr Tyr Met Lys Glu Asn
 115 120 125
 Gly Ile Gln Asp Met Glu Gln Phe Tyr Glu Leu Trp Leu Lys Ser Gln
 130 135 140
 Lys Asn Glu Lys Ser Glu Asp Ile Ala Ser Gln Ser Asn Lys Glu Asn
 145 150 155 160
 Gly Lys Gln Ile His Met Pro Thr Asp Tyr Ala Glu Val Thr Val Asp
 165 170 175
 Phe His Cys Trp Met Cys Gly Lys Asn Cys Asn Ser Glu Lys Gln Trp
 180 185 190
 Gln Gly His Ile Ser Ser Glu Lys His Lys Glu Lys Val Phe His Thr
 195 200 205
 Glu Asp Asp Gln Tyr Cys Trp Gln His Arg Phe Pro Thr Gly Tyr Phe
 210 215 220
 Ser Ile Cys Asp Arg Tyr Met Asn Gly Thr Cys Pro Glu Gly Asn Ser
 225 230 235 240
 Cys Lys Phe Ala His Gly Asn Ala Glu Leu His Glu Trp Glu Glu Arg
 245 250 255
 Arg Asp Ala Leu Lys Met Lys Leu Asn Lys Ala Arg Lys Asp His Leu
 260 265 270
 Ile Gly Pro Asn Asp Asn Asp Phe Gly Lys Tyr Ser Phe Leu Phe Lys
 275 280 285
 Asp Leu Asn
 290

<210> 5407
 <211> 2010
 <212> DNA
 <213> Homo sapiens

<400> 5407
 ataaaagggga gaggagcgaa catggcagcg cgttggcggt ttggtgtgt ctctgtgacc
 60

atattggcag aattggaagc aaatgtacct ggagcgcagg tacttggttaa tcaaataatg
 60
 cctggatttc ttaatatgaa gataaagttt gtgtgcgccc agtgtctgag aaacgggtcaa
 120
 gtcattgaac cagacaaaaa cagaaaatat tgtagtgcaa aagcaaggca ttcgtggacc
 180
 aaagaccggc gtgcgatgag agtgatgtct attgaacgta agaagtggat gaacatccgt
 240
 cctctcccca caaagaaaca aatgccttta cagtttgatc tgtgcaacca tattgcttct
 300
 gggaaaaaat gtcaatatgt gggaaactgt tcctttgctc atagtcctga ggaaagagaa
 360
 gtttggactt acatgaagga gaatgggata caagatatgg agcaatttta cgaactatgg
 420
 ctcaagagtc aaaaaaatga aaaaagtga gacatagcca gtcagtcaaa caaggaaaaat
 480
 ggaaaaacaaa ttcacatgcc aacagattat gctgaagtta cagtggactt tcactgctgg
 540
 atgtgtggga aaaactgcaa cagtgagaag cagtggcagg gccacatctc ctccgagaag
 600
 cacaaagaga aggttttcca caccgaggac gaccagtact gctggcagca ccgcttccca
 660
 acaggctatt tcagtatttg tgataggtat atgaatggca cctgcccaga aggaaacagc
 720
 tgtaaatttg cacatggaaa tgccgaactt catgaatggg aagaaagaag agatgcccta
 780
 aagatgaagc tcaacaaagc acgaaaagat cacttaattg gcccaaataa taatgacttt
 840
 ggaaaatata gttttttgtt taaagattta aactaatatg ctggctttta tgtatgatac
 900
 ctaatcagag cattgaccag aaaaattgaa agtggtctga ggcacatagc agaggagctg
 960
 cagatttctt gcttgatttg gcgtatatcg ttctctctga gcagcaaccc acagtaggta
 1020
 ggaaaatggg ctgtttcaca ggcttgccca cgctctcacg gaaccactgg catcagatgg
 1080
 tgaagtgact gctacccggt tgccatctgt tgaacagact tttggatgaa gtgtgttggg
 1140
 gaagaggata aggttatatc taggacaact ctttgagttg gtccttcata taagaatcgt
 1200
 gacggtaaga gaataaacac ttgtactggg atcagaatac atgatggatg aaattcttta
 1260
 catgttttag cagaatgaat ttgtttaata taataaagtt tgctacttat ctgtatgtag
 1320
 gttgctaaaa aggatcttct taactcagat ttaagccaa ataaccattt aacactagta
 1380
 tttgttaaat ggggtatttt tctgtatttg tatgtttcac tataataagg gaattaagga
 1440
 taatgtgcat tgagaatatt ttgaaaaata attgactcaa attttatttc ttggtctttt
 1500
 gctgtttaaa tgatgatttt gaaagattaa acctgtactg ttggtattgt gttagtgtat
 1560
 ggaccaatac tgctgtaat aaagatttta tatataaaaa aaaaaaaaaa
 1609

<212> DNA

<213> Homo sapiens

<400> 5403

ggcgccttccc cctcgacggc gccagctcct cggcctctag ctccaggatg tgctcgtcg
 60
 cacgcgctag ttcgcgctgc tggatcaggc tcaggatctc cagcactgac aatggctcct
 120
 tcattcttgg gggctctggg accttgggtg ggggctctgg agctgcctcg cctgcaggca
 180
 ccactctctc agccaggggac gcacgctggg gctntggatc cagcctccag tctcaggaag
 240
 gccagtctcc gggcggcctc ccccgctgcc tcctcgctgc cgtgggctcg ggtcccatgc
 300
 agccggggcca ggaggccaaa atctgctgag ctctcgctga tccctggtac cagcacacgg
 360
 cccaagaaag agcggggctg cccatcccca gggctgcctg ccgccggccc gggggccagc
 420
 ccagccggaa gggggccagg cccgcaagct t
 451

<210> 5404

<211> 150

<212> PRT

<213> Homo sapiens

<400> 5404

Ala	Pro	Ser	Pro	Ser	Thr	Ala	Pro	Ala	Pro	Arg	Pro	Leu	Ala	Pro	Gly
1				5					10				15		
Cys	Ala	Arg	Pro	His	Ala	Leu	Val	Arg	Ala	Ala	Gly	Ser	Gly	Ser	Gly
			20					25				30			
Ser	Pro	Ala	Leu	Thr	Met	Ala	Pro	Ser	Ser	Leu	Gly	Ala	Leu	Gly	Pro
		35				40					45				
Trp	Val	Gly	Ala	Leu	Glu	Leu	Pro	Arg	Leu	Gln	Ala	Pro	Leu	Ser	Gln
	50					55				60					
Pro	Gly	Thr	His	Ala	Gly	Ala	Xaa	Asp	Pro	Arg	Pro	Ser	Leu	Arg	Lys
65				70				75					80		
Ala	Ser	Leu	Arg	Ala	Ala	Ser	Pro	Ala	Ala	Ser	Ser	Ser	Pro	Trp	Ala
			85					90					95		
Arg	Val	Pro	Cys	Ser	Arg	Ala	Arg	Arg	Pro	Lys	Ser	Ala	Glu	Leu	Leu
		100					105					110			
Arg	Ile	Pro	Gly	Thr	Ser	Thr	Arg	Pro	Lys	Lys	Glu	Arg	Gly	Cys	Pro
	115					120					125				
Ser	Pro	Gly	Leu	Pro	Ala	Ala	Gly	Pro	Gly	Pro	Ser	Pro	Ala	Gly	Arg
	130					135					140				
Gly	Pro	Gly	Pro	Gln	Ala										
145					150										

<210> 5405

<211> 1609

<212> DNA

<213> Homo sapiens

<400> 5405

	100		105		110
Leu Thr Asp	Ala Ser Ala Cys	Lys Asn Ile	Leu Arg Phe	Ile Gln Phe	
	115	120		125	
Glu Pro Glu	Glu Asp Ile Lys	Arg Lys Phe	Met Arg Lys	Lys Asp Lys	
	130	135		140	
Lys Leu Ser	Asp Met His Gln	Ile Val Asn	Ile Asp Leu	Met Leu Glu	
145	150		155	160	
Met Ser Thr	Ser Leu Ala Ala	Val Thr Pro	Ile Ile Glu	Arg Glu Ser	
	165		170	175	
Gly Gly His	His Tyr Val Asn	Met Thr Leu	Pro Val Asp	Ala Val Ile	
	180		185	190	
Ser Val Ala	Pro Glu Glu Thr	Trp Gly Lys	Val Arg Lys	Leu Leu Val	
	195	200		205	
Asp Ala Ile	His Asn Gln Leu	Thr Asp Met	Glu Lys Cys	Ile Leu Lys	
	210	215		220	
Tyr Met Lys	Arg Thr Ser Ile	Val Val Pro	Glu Pro Leu	His Phe Leu	
225	230		235	240	
Leu Pro Gly	Lys Lys Asn Leu	Val Thr Ile	Ser Tyr Pro	Ser Gly Ile	
	245		250	255	
Pro Asp Gly	Gln Leu Gln Ala	Tyr Arg Lys	Glu Leu His	Asp Leu Phe	
	260		265	270	
Asn Leu Pro	His Asp Arg Pro	Tyr Phe Lys	Arg Ser Asn	Ala Tyr His	
	275	280		285	
Phe Pro Asp	Glu Pro Tyr Lys	Asp Gly Tyr	Ile Arg Asn	Pro His Thr	
	290	295		300	
Tyr Leu Asn	Pro Pro Asn Met	Glu Thr Gly	Met Ile Tyr	Val Val Gln	
305	310		315	320	
Gly Ile Tyr	Gly Tyr His His	Tyr Met Gln	Asp Arg Ile	Asp Asp Asn	
	325		330	335	
Gly Trp Gly	Cys Ala Tyr Arg	Ser Leu Gln	Thr Ile Cys	Ser Trp Phe	
	340		345	350	
Lys His Gln	Gly Tyr Thr Glu	Arg Ser Ile	Pro Thr His	Arg Glu Ile	
	355	360		365	
Gln Gln Ala	Leu Val Asp Ala	Gly Asp Lys	Pro Ala Thr	Phe Val Gly	
	370	375		380	
Ser Arg Gln	Trp Ile Gly Ser	Ile Glu Val	Gln Leu Val	Leu Asn Gln	
385	390		395	400	
Leu Ile Gly	Ile Thr Ser Lys	Ile Leu Phe	Val Ser Gln	Gly Ser Glu	
	405		410	415	
Ile Ala Ser	Gln Gly Arg Glu	Leu Ala Asn	His Phe Gln	Ser Ser Glu	
	420		425	430	
Thr Pro Val	Met Ile Gly Gly	Gly Val Leu	Ala His Thr	Ile Leu Gly	
	435	440		445	
Val Ala Trp	Asn Glu Ile Thr	Gly Gln Ile	Lys Phe Leu	Ile Leu Asp	
	450	455		460	
Pro His Tyr	Thr Gly Ala Glu	Asp Leu Gln	Val Ile Leu	Glu Lys Gly	
465	470		475	480	
Trp Cys Gly	Trp Lys Gly Pro	Asp Phe Trp	Asn Lys Asp	Ala Tyr Tyr	
	485		490	495	
Asn Leu Cys	Leu Pro Gln Arg	Pro Asn Met	Ile		
	500	505			

<210> 5403

<211> 451

gacgttcctt taataactta aaagacaaag catacacaac cagcatatta taggcatgta
 1740
 aatacatgtg ttcttaaagt gatcttcact tggaagaaag tttttcgtcc ttctcagaag
 1800
 gagattagac acaacatatg gtaaagccaa aagcaggagc ttatagattt gcatgaaatg
 1860
 aaggcgttct tcagacttct tcataacca cgtgacatct gtttttaaaa acacgttaac
 1920
 attaaaaact tttttttaa aagagtttta tccccaaact tccacatgc agtccccattt
 1980
 ttgggtctcta gactctggta agtataacca gtactaaaat gttaatgaga atgaaacaat
 2040
 actactagaa atacgagtgt cagtattaaa tggaataata aatgctatgc aaacaagaga
 2100
 tcactgcggtg aggaaaaaag cagcagctct gagttactta ccagcacttc cttttccac
 2160
 tgggtattttc tacacttccg agactccgtt tctgtctgag cacggcaaca caatcattcc
 2220
 tgtcagggtg ttcacttgct tttattgtct gcatacattt aattgttgta agaaacttgg
 2280
 cacagtctgg aaatccacat gaccaagcga gatcttcagc tgtttgcccg ttcttattac
 2340
 ataaactgaa aacaggataa aaacggagtg aaatgaaaca ttgaacttaa gtcttttttt
 2400
 tatatcttac aagggaattt tgggctcata caaatgttgg ttgcagaaca gaagaggtaa
 2460
 aggatgcata aggaaattgc atttttggtc actattgtat cctcagcaac taacagaatc
 2520
 cagcatagag cgggcattcc agttctgaat gaatgttaga attatctgat gtttaataca
 2580
 gtgtatgagt acccaaaggt agtcaatggg aactatagaa tgggttttcc tgaaccgaaa
 2640
 ctgaagtaga atacagtcac aatgaacaaa attg
 2674

<210> 5402

<211> 507

<212> PRT

<213> Homo sapiens

<400> 5402

Xaa	Leu	Ser	Lys	Glu	Gly	Ala	Pro	Ala	Leu	Gly	Pro	Trp	Val	Thr	Pro
1				5					10					15	
Phe	Lys	Ala	Arg	Pro	Arg	Glu	Phe	Trp	Ala	Arg	Cys	Lys	Arg	Pro	Cys
			20					25					30		
Pro	Arg	His	Val	Ala	Asp	Met	Val	Ile	Ser	Glu	Ser	Met	Asp	Ile	Leu
			35				40					45			
Phe	Arg	Ile	Arg	Gly	Gly	Leu	Asp	Leu	Ala	Phe	Gln	Leu	Ala	Thr	Pro
		50				55				60					
Asn	Glu	Ile	Phe	Leu	Lys	Lys	Ala	Leu	Lys	His	Val	Leu	Ser	Asp	Leu
65				70					75					80	
Ser	Thr	Lys	Leu	Ser	Ser	Asn	Ala	Leu	Val	Phe	Arg	Ile	Cys	His	Ser
			85					90					95		
Ser	Val	Tyr	Ile	Trp	Pro	Ser	Ser	Asp	Ile	Asn	Thr	Ile	Pro	Gly	Glu

ccccggaat tttgggccag gtgtaagcgc ccgtgtcccc gccacgtcgc ggacatggtg
120
atttcagaaa gtaggatata actcttcaga ataagaggag gccttgattt ggcttttcag
180
ctagctactc ctaatgaaat ttttctcaag aaggcactga aacatgtgtt gagtgacctg
240
tcaactaagc tgtcttcaaa cgccttctgtg ttcagaattt gccacagttc agtgatatata
300
tggcctagca gtgacataaa caccattcct ggagaactga ctgatgcttc tgcttgtaag
360
aacatactgc gctttattca atttgagcca gaagaagata taaaagaaa attcatgaga
420
aagaaggaca aaaagttatc agacatgcat caaatagtaa atatagatct tatgctggaa
480
atgtcaacct ccctggcagc tgtaacgccc atcattgaaa gggaaagcgg aggacaccat
540
tatgttaata tgactttacc tgcgatgca gttatatctg ttgctccaga agaaacatgg
600
ggaaaagtgc gtaagctcct ggttgatgca attcataatc aactaactga catggaaaaa
660
tgtattttga aatatatgaa aagaacatct attgtggtcc ctgaaccact gcacttttta
720
ttaccagga aaaaaaatct tgtaacaatt tcatatcctt caggaatacc agatggccag
780
ctgcaggcct ataggaagga gttacatgat cttttcaatc tgcctcacga cagaccctat
840
ttcaaaaggt ctaatgctta tcactttcca gatgagccat acaaagatgg ttacattaga
900
aatccacata cttaccttaa tccacctaac atggagactg gtatgattta tgtggtccag
960
ggcatatatg gctatcatca ttatatgcag gatcgcatag atgacaatgg ctggggctgt
1020
gcttatcgat ctctgcagac tatctgctct tggttcaaac atcagggata cacagagagg
1080
tccattccaa cacacagaga aattcagcag gctctagtcg atgccgggga caaaccagca
1140
acatttgctg gatcgcgga atggattgga tctattgagg tgcagctggt actaaaccaa
1200
ttgatcggtg taacgtcaaa aatcctgttt gtcagccaag gttcagaaat tgcctctcaa
1260
ggacgggaac tggctaata tttccaaagt gaaggaaactc cagttatgat cgggggagga
1320
gttttgcccc acacaatact aggagtgtga tggaaatgaga ttacagggca gataaagttt
1380
ctgattctag atccacatta taccggtgct gaagacctgc aagttatttt ggaaaagggc
1440
tgggtcggtg ggaagggccc agatttttgg aacaaggatg catactataa cttatgtctt
1500
cctcagcgac caaatatgat ttaaaatata ttggagtcaa agactgcagt agagtggat
1560
tataaatttg tgaataaaga atcagtttaa tttttcacat taaatcctgg ttctagtttg
1620
accattttaa ttatgacctt tttcaaaggt tgtaataact gcacggagaa tgtattttta
1680

atgtctcagg aaggctatgg aactagatct caacctcctc tggcccccg aaaacctaac
 480
 catgaagact tgaacttaat acagcaagaa agaccatcaa gtttaccagt aagacattat
 540
 tgtgctgatt tggaaatgta atgagttaaa gacttttaga aagagctgtt gtttttggtt
 600
 gttctacttt atattatgac atgattgaga agtttctaga cttcagggtt attttggtgt
 660
 caatttttca aggtttacct tttaggagct ctgtagtcct ggataagtct atttcagtgt
 720
 tatatatctc tgttgacagag tgtagacatc agttggaagg ttttatgcgg ctggtcgatt
 780
 ttgtgtgcag gtgggtattg ctgccaaaaa gcaacagcct aaagaaagct caact
 835

<210> 5400

<211> 186

<212> PRT

<213> Homo sapiens

<400> 5400

Xaa	Ala	Ala	Gln	Gln	Arg	Ser	His	Pro	Ala	Met	Ser	Pro	Gly	Thr	Pro
1			5					10					15		
Gly	Pro	Thr	Met	Gly	Arg	Ser	Gln	Gly	Ser	Pro	Met	Asp	Pro	Met	Val
		20					25					30			
Met	Lys	Arg	Pro	Gln	Leu	Tyr	Gly	Met	Gly	Ser	Asn	Pro	His	Ser	Gln
		35					40					45			
Pro	Gln	Gln	Ser	Ser	Pro	Tyr	Pro	Gly	Gly	Ser	Tyr	Gly	Pro	Pro	Gly
	50					55					60				
Pro	Gln	Arg	Tyr	Pro	Ile	Gly	Ile	Gln	Gly	Arg	Thr	Pro	Gly	Ala	Met
65					70					75					80
Ala	Gly	Met	Gln	Tyr	Pro	Gln	Gln	Gln	Met	Pro	Pro	Gln	Tyr	Gly	Gln
			85						90					95	
Gln	Gly	Val	Ser	Gly	Tyr	Cys	Gln	Gln	Gly	Gln	Gln	Pro	Tyr	Tyr	Ser
			100						105				110		
Gln	Gln	Pro	Gln	Pro	Pro	His	Leu	Pro	Pro	Gln	Ala	Gln	Tyr	Leu	Pro
		115					120					125			
Ser	Gln	Ser	Gln	Gln	Arg	Tyr	Gln	Pro	Gln	Gln	Asp	Met	Ser	Gln	Glu
	130						135					140			
Gly	Tyr	Gly	Thr	Arg	Ser	Gln	Pro	Pro	Leu	Ala	Pro	Gly	Lys	Pro	Asn
145					150					155					160
His	Glu	Asp	Leu	Asn	Leu	Ile	Gln	Gln	Glu	Arg	Pro	Ser	Ser	Leu	Pro
			165						170					175	
Val	Arg	His	Tyr	Cys	Ala	Asp	Leu	Glu	Met						
			180						185						

<210> 5401

<211> 2674

<212> DNA

<213> Homo sapiens

<400> 5401

nccctttcaa aagaagggtgc ccccgccctt ggcccggtggg taacgccatt taaggcccg
 60

ggtttgaaga ggagagcaga ccacccagag tagtgggaga aagcaccggc agaaaagctg
 480
 gcatatccac cgagggcctc tctgcttctt ttgacctttt tcagagtttc agagttatga
 540
 accaaatcgc cttcatgaga g
 561

<210> 5398

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5398

Met	Ala	Leu	Gly	Ser	Thr	Trp	Thr	Pro	Glu	His	Lys	Thr	Gly	Gly	Arg
1				5					10					15	
Asp	Ala	Ile	His	Ser	Ala	Gly	Thr	Tyr	Ala	His	Asp	Gln	Leu	Ser	Gln
			20					25					30		
Thr	Ser	Ile	Pro	Ile	Ser	Pro	Pro	Leu	Thr	Pro	Gln	Asp	Ala	Asn	Glu
		35					40					45			
Ala	Gln	Gly	Trp	Ala	Glu	Ala	Gly	Arg	Ala	Val	His	Arg	Glu	Asp	Pro
	50					55					60				
Arg	Val	Ser	Leu	Gly	Leu	Pro	Arg	Trp	Leu	Cys	Pro	Pro	Phe	Cys	Leu
65					70					75					80
Gly	Gly	Ser	Leu	Arg	Leu	Gly	Arg	Ala	Gln	Arg	Glu	Gly	Asp	Pro	Glu
				85					90					95	
Gly	Leu	Ala	Asp	Ser	Gly	Pro	Pro	Cys	Glu	Leu	Arg	Phe	Glu	Glu	Glu
			100					105					110		
Ser	Arg	Pro	Pro	Arg	Val	Val	Gly	Glu	Ser	Thr	Gly	Arg	Lys	Ala	Gly
		115					120					125			
Ile	Ser	Thr	Glu	Gly	Leu	Ser	Ala	Ser	Phe	Asp	Leu	Phe	Gln	Ser	Phe
	130					135					140				
Arg	Val	Met	Asn	Gln	Ile	Ala	Phe	Met	Arg						
145					150										

<210> 5399

<211> 835

<212> DNA

<213> Homo sapiens

<400> 5399

ncggccgcgc aacaaaggag tcacccggcg atgagccccg gcacccccgg accgaccatg
 60
 ggcagatccc agggcagccc aatggatcca atggtgatga agagacctca gttgtatggc
 120
 atgggcagta accctcattc tcagcctcag cagagcagtc cgtacccagg aggttcctat
 180
 ggccctccag gccacagcg gtatccaatt ggcattccagg gtcggactcc cggggccatg
 240
 gccggaatgc agtacctca gcagcagatg ccacctcagt atggacagca aggtgtgagt
 300
 ggttactgcc agcagggcca acagccatat tacagccagc agccgcagcc cccgcacctc
 360
 ccaccccagg cgcagtatct gccgtcccag tcccagcaga ggtaccagcc gcagcaggac
 420

	500		505		510
Ala	Ser Ser Gln Gln Glu Lys Glu Asp Lys Pro Ala Glu Thr Lys Lys				
	515		520		525
Leu	Arg Ile Ala Trp Pro Pro Thr Glu Leu Gly Ser Ser Gly Ser				
	530		535		540
Ala	Leu Glu Glu Gly Ile Lys Met Ser Lys Pro Lys Trp Pro Pro Glu				
545		550		555	560
Asp	Glu Ile Ser Lys Pro Glu Val Pro Glu Asp Val Asp Leu Asp Leu				
	565		570		575
Lys	Lys Leu Arg Arg Ser Ser Ser Leu Lys Glu Arg Ser Arg Pro Phe				
	580		585		590
Thr	Val Ala Ala Ser Phe Gln Ser Thr Ser Val Lys Ser Pro Lys Thr				
	595		600		605
Val	Ser Pro Pro Ile Arg Lys Gly Trp Ser Met Ser Glu Gln Ser Glu				
	610		615		620
Glu	Ser Val Gly Gly Arg Val Ala Glu Arg Lys Gln Val Glu Asn Ala				
625		630		635	640
Lys	Ala Ser Lys Lys Asn Gly Asn Val Gly Lys Thr Thr Trp Gln Asn				
	645		650		655
Lys	Glu Ser Lys Gly Glu Thr Gly Lys Arg Ser Lys Glu Gly His Ser				
	660		665		670
Leu	Glu Met Glu Asn Glu Asn Leu Val Glu Asn Gly Ala Asp Ser Asp				
	675		680		685
Glu	Asp Asp Asn Ser Phe Leu Lys Gln Gln Ser Pro Gln Glu Pro Lys				
	690		695		700
Ser	Leu Asn Trp Ser Ser Phe Val Asp Asn Thr Phe Ala Glu Glu Phe				
705		710		715	720
Thr	Thr Gln Asn Gln Lys Ser Gln Asp Val Glu Leu Trp Glu Gly Glu				
	725		730		735
Val	Val Lys Glu Leu Ser Val Glu Glu Gln Ile Lys Arg Asn Arg Tyr				
	740		745		750
Tyr	Asp Glu Asp Glu Asp Glu Glu				
	755		760		

<210> 5397

<211> 561

<212> DNA

<213> Homo sapiens

<400> 5397

```

tttttttttt gcgaatctgt tgatttattt acggctcggg gagacgacgc tggacgctgg
60
ttagggtaag ggtaggggca agcattagca gcagggggcat ggccctggga agcacctgga
120
ccccagaaca taagacagga gggagagatg ccatccattc agcggggcact tatgcccacg
180
accagctgag ccagaccagc attcccattt caccaccctt tactcctcaa gatgcaaagt
240
aagctcaggg ctgggaggaa gctggcaggg ctgtccacag ggaggacccc cgtgtgtctc
300
tcgggctgcc caggtggctc tgtccaccct tctgtctggg aggctcctta aggctgggga
360
gggcccagag ggaaggagat cctgaggggc tggcagattc aggccctccc tgcgagctga
420

```

4579

aacaaaaaaaa cacaacaaac acatttctaaa tactagagat aactttactt aaatttcttca
 2640
 ttttagcagt gatgatatgc ataagtgctg taaggcttgt aactggggaa atattccacc
 2700
 tgataatagc ccagattcta ctgtattccc aaaaggcaat attaaggtag atagatgatt
 2760
 agtagtatat tgttacacac tattttggaa ttagagaaca tacagaagga atttaggggc
 2820
 ttaaacatta cgactgaatg cacttttagta taaagggcac agtttgtata tttttaaatg
 2880
 aataccaatt taatttttta gtatttacct gttaagagat tatttagtct ttaaattttt
 2940
 taggttaatt ttcttgctgt gatatatatg aggaatttac tactttatgt cctgctctct
 3000
 aaactacatc ctgaactcga cgtcctgagg tataatacaa cagagcactt ttgaggcaa
 3060
 ttgaaaaacc aacctacact cttcggtgct tagagagatc tgctgtctcc caaataagct
 3120
 tttgtatctg ccagtgaatt tactgtactc caaatgattg ctttcttttc tggtgatc
 3180
 tgtgcttctc ataattactg aaagctgcaa tatttttagta ataccttcgg gatcactgtc
 3240
 ccccatcttc cgtggttagag caaagtgaag agtttaaagg aggaagaaga aagaactgtc
 3300
 ttacaccact tgagctcaga cctctaaacc ctgtatttcc cttatgatgt cccctttttg
 3360
 agacactaat ttttaaacac ttactagctc tgaaatatat tgatttttat cacagtattc
 3420
 tcagggtgaa attaaaccaa ctataggcct ttttcttggg atgattttct agtcttaagg
 3480
 tttggggaca ttataaactt gagtacattt gttgtacaca gttgatattc caaattgtat
 3540
 ggatgggagg gagagggtgc ttaagctgta ggcttttctt tgtactgcat ttatagagat
 3600
 ttagctttta tatttttttag agatgtaaaa cattctgctt tcttagtctt acctagtctg
 3660
 aaacattttt attcaataaa gattttaatt aaaatttgaa aaaaaaaaaa a
 3711

<210> 5396

<211> 760

<212> PRT

<213> Homo sapiens

<400> 5396

Met	Glu	Ser	Ser	Pro	Phe	Asn	Arg	Arg	Gln	Trp	Thr	Ser	Leu	Ser	Leu
1				5					10				15		
Arg	Val	Thr	Ala	Lys	Glu	Leu	Ser	Leu	Val	Asn	Lys	Asn	Lys	Ser	Ser
			20					25					30		
Ala	Ile	Val	Glu	Ile	Phe	Ser	Lys	Tyr	Gln	Lys	Ala	Ala	Glu	Glu	Thr
		35					40					45			
Asn	Met	Glu	Lys	Lys	Arg	Ser	Asn	Thr	Glu	Asn	Leu	Ser	Gln	His	Phe
	50					55					60				
Arg	Lys	Gly	Thr	Leu	Thr	Val	Leu	Lys	Lys	Lys	Trp	Glu	Asn	Pro	Gly

taccaggcag ctgtgtccaa acaaagcagc tcaaccaact atacaaatga gctgaaagcc
1020
agtgggtggcg aaatcaaaat tcataaaatg gagcaaaagg agaattgtgcc cccaggtcct
1080
gaggtctgca tcacccatca ggaaggggaa aagatttctg caaatgagaa tagcctggca
1140
gtccgttcca cccctgccga agatgactcc ccaggtgact cccaggttaa gagtggggt
1200
caacagcctg tccatcccaa gccactaagt ccagattcca gagcctccag tctttctgaa
1260
agttctcctc ccaaagcaat gaagaagttt caggcacctg caagagagac ctgctggaa
1320
tgtcagaaga cagtctatcc aatggagcgt ctcttggcca accagcaggt gtttcacatc
1380
agctgcttcc gttgctccta ttgcaacaac aaactcagtc taggaacata tgcattctta
1440
catggaagaa tctattgtaa gcctcacttc aatcaactct ttaaactctaa gggcaactat
1500
gatgaaggct ttgggcacag accacacaag gatctatggg caagcaaaaa tgaaaacgaa
1560
gagatttttg agagaccagc ccagcttgca aatgcaaggg agaccctca cagcccaggg
1620
gtagaagatg cccctattgc taaggtgggt gtcttggtg caagtatgga agccaaggcc
1680
tcctctcagc aggagaagga agacaagcca gctgaaacca agaagctgag gatcgcttg
1740
ccacccccca ctgaacttg aagttcagga agtgcccttg aggaaggat caaaatgtca
1800
aagcccaa at ggctcctga agacgaaatc agcaagcccg aagttcctga ggatgtcgat
1860
ctagatctga agaagctaag acgatcttct tctactgaagg aaagaagccg cccattcact
1920
gtagcagctt catttcaaag cacctctgtc aagagcccaa aaactgtgtc cccacctatc
1980
aggaaaggct ggagcatgtc agagcagagt gaagagtctg tgggtggaag agttgcagaa
2040
aggaaacaag tggaaaatgc caaggcttct aagaagaatg ggaatgtggg aaaaacaacc
2100
tggcaaaaaca aagaatctaa aggagagaca gggaagagaa gtaaggaagg tcatagtgtg
2160
gagatggaga atgagaatct tgtagaaaat ggtgcagact ccgatgaaga tgataacagc
2220
ttcctcaaac aacaatctcc acaagaaccc aagtctctga attggtcgag tttttagac
2280
aacacctttg ctgaagaatt cactactcag aatcagaaat cccaggatgt ggaactctg
2340
gagggagaag tggtaaaga gctctctgtg gaagaacaga taaagagaaa tcgggtattat
2400
gatgaggatg aggatgaaga gtgacaaatt gcaatgatgc tgggccttaa attcatgtta
2460
gtgttagcga gccactgccc tttgtcaaaa tgtgatgcac ataagcaggt atcccagcat
2520
gaaatgta at ttacttgga gtaacttttg aaaagaattc cttcttaaaa tcaaaaacaa
2580

```

<400> 5395
cccgggggccg caggagcagt aggtgttagc agcttggtcg cgacagggtgc gctaggtaga
60
gcgccggggac ctgtgacagg gctggtagca gcgcagagga aaggcggctt ttagccaggt
120
atttcagtgt ctgtagacag gatggaatca tctccattta atagacggca atggacctca
180
ctatcattga gggtaacagc caaagaactt tctcttgtca acaagaacaa gtcacggct
240
attgtggaag tattctccaa gtaccagaaa gcagctgaag aaacaaacat ggagaagaag
300
agaagtaaca ccgaaaatct ctcccagcac tttagaaagg ggaccctgac tgtgttaaag
360
aagaagtggg agaaccagg gctgggagca gagtctcaca cagactctct acggaacagc
420
agcactgaga ttaggcacag agcagaccat cctcctgctg aagtgacaag ccacgtgct
480
tctggagcca aagctgacca agaagaacaa atccaccca gatctagact caggtcacct
540
cctgaagccc tcgttcaggg tcgatatccc cacatcaagg acggtgagga tcttaaagac
600
cactcaacag aaagtaaaaa aatggaaaat tgtctaggag aatccaggca tgaagtagaa
660
aaatcagaaa tcagtgaaaa cacagatgct tcgggcaaaa tagagaaata taatgttcgg
720
ctgaacaggc ttaagatgat gtttgagaaa ggtgaaccaa ctcaaaactaa gattctccgg
780
gcccaaagcc gaagtgcaag tggaaggaag atctctgaaa acagctattc tctagatgac
840
ctggaaatag gcccagggtca gttgtcatct tctacatttg actcggagaa aaatgagagt
900
agacgaaatc tggaacttcc acgcctctca gaaacctcta taaaggatcg aatggccaag
960

```

agggacagca tgactcgctt tgcgatgaa aagcacgaag ttgtcagcac agaacctggc
 4440
 cagtccttga gaaactccct ccttggtggt cagaggtcaa gcagcccatg tggcccacgg
 4500
 tcctgaagaa ctgggctatg tccttgaggc tcctctctac cgtctgactg tggggctctgg
 4560
 ggaacaggca tttaaaccag gctgctgccc tggggagtgc ccactggacg ccagggtgcc
 4620
 ccatagggac aggggtcaca agccctgggg cttccctgc cagtcctggt gaggacagt
 4680
 tggtcactat ctcagagaga cgaaaaatga atattctgtc atttcagact aaactactca
 4740
 cccagctcac actaatatgg atttgtaaat ttacctttt ttttctttc caacttttag
 4800
 ttcaagggtt gttacatggg taaattggat cataggg
 4837

<210> 5394

<211> 354

<212> PRT

<213> Homo sapiens

<400> 5394

Leu	Tyr	Asp	Gln	Ala	Leu	Leu	Gly	Ile	Leu	Gln	His	Val	Gly	Asn	Val
1				5				10						15	
Gln	Asp	Phe	Leu	Arg	Val	Leu	Phe	Gly	Phe	Leu	Tyr	Arg	Lys	Thr	Asp
			20					25					30		
Phe	Tyr	Arg	Leu	Leu	Arg	His	Pro	Ser	Asp	Arg	Met	Gly	Phe	Pro	Pro
			35				40					45			
Gly	Ala	Ala	Gln	Ala	Leu	Val	Leu	Gln	Val	Phe	Lys	Thr	Phe	Asp	His
	50				55					60					
Met	Ala	Arg	Gln	Asp	Asp	Glu	Lys	Arg	Arg	Gln	Glu	Leu	Glu	Glu	Lys
65				70					75					80	
Ile	Arg	Arg	Lys	Glu	Glu	Glu	Glu	Ala	Lys	Thr	Val	Ser	Ala	Ala	Ala
			85					90						95	
Ala	Glu	Lys	Glu	Pro	Val	Pro	Val	Pro	Val	Gln	Glu	Ile	Glu	Ile	Asp
			100					105					110		
Ser	Thr	Thr	Glu	Leu	Asp	Gly	His	Gln	Glu	Val	Glu	Lys	Val	Gln	Pro
			115				120					125			
Pro	Gly	Pro	Val	Lys	Glu	Met	Ala	His	Gly	Ser	Gln	Glu	Ala	Glu	Ala
			130				135				140				
Pro	Gly	Ala	Val	Ala	Gly	Ala	Ala	Glu	Val	Pro	Arg	Glu	Pro	Pro	Ile
145				150						155				160	
Leu	Pro	Arg	Ile	Gln	Glu	Gln	Phe	Gln	Lys	Asn	Pro	Asp	Ser	Tyr	Asn
			165					170						175	
Gly	Ala	Val	Arg	Glu	Asn	Tyr	Thr	Trp	Ser	Gln	Asp	Tyr	Thr	Asp	Leu
			180					185					190		
Glu	Val	Arg	Val	Pro	Val	Pro	Lys	His	Val	Val	Lys	Gly	Lys	Gln	Val
			195				200					205			
Ser	Val	Ala	Leu	Ser	Ser	Ser	Ser	Ile	Arg	Val	Ala	Met	Leu	Glu	Glu
			210				215				220				
Asn	Gly	Glu	Arg	Val	Leu	Met	Glu	Gly	Lys	Leu	Thr	His	Lys	Ile	Asn
225				230						235				240	
Thr	Glu	Ser	Ser	Leu	Trp	Ser	Leu	Glu	Pro	Gly	Lys	Cys	Val	Leu	Val

gaattcttgt catctatgag gggtcctgag aaagacttgt cttttttttt cctggagttc
2820
ttcccatgga ggtcctagga ttgacacacc actgtcccac aagagctttc ctgcctaata
2880
aaaggagggtc ttgtggtgtg tgtctcctct cttctctata gttcccgagt tggcccccac
2940
tgcagccccc accctgtggg tagtcttcca gaagtgatgc agtgggtgtga gatgccctac
3000
accttggttat ttgggagact ttgagagtca ttcacttcca tggtgactag tgtttgtttt
3060
gcttgatttt atattctgtg ttgcatttct cccactccc tgccttgctt taataaacag
3120
caaaccaata tctaggaaga atgactgagg gatagtattg ggtattggcc ccatggcagg
3180
aacagccact tgcactgtgt cccggtgcca cactgcggtg cttgggtgtg ttgtggagcc
3240
tgtccctgcg cgccttgctc ccgttgagcc acgctgtctg gtgggtgatt ctctgccctg
3300
agccaccacc ctggactggc ccagtctcca gagctggcac accctgcctg ttttctcttt
3360
ttagacacaa cagccgcagt ttggccagcc actaagtccc accagctgag gtccgaggaa
3420
agcgggggtga ctcatctccc ttgtccaggg cccgaggaga gtgaggtgtc cagcctgcaa
3480
agctattcca gtccttggt gttggtttgc aataaattgg tatttaagca gttctgggtc
3540
tgcgtgtgac atttgctgct gagacagttc tgtctgtgca tggtcattat tgttgcatc
3600
tagccttgag gtcccaggcc aacgtacaca gcaaacacca gcatggggaa ttcttagggg
3660
ttgtttccca tctggtctga atgactggg caagatctca atacagcttt agaaatcctg
3720
taagattttg accagtgggg agaaaaagaa tgtagctata gatcttacat cctttcaaac
3780
aggttctgga attctgtagt tactggaaag cttaggggtga gtgcagagtt gggaatgatt
3840
ccactgaagg gccaccttg cccaccaggc tccaaggccc tccttggtct ccaggtgcat
3900
acctgctgtt aactttgctg agccctcgca atgggcttcc tccaggacat aacgccgtgt
3960
ctgacacaga agtctcccag gtggctggcc acctgcttct tcctcagtca gatctttgac
4020
tctccttctc tgtgcccacc ccactccag cctcctctga ccctgctcac ccctggggac
4080
aggacctagg ggtgtgagaa gtacttggt gaataaagac tgtttcaaag gcaatcctta
4140
gaattgccta gcatactccc agggccagaa ataaccgcc agaaaggaga ggcgtatttg
4200
cccctgaaga gtgcaggagg gagaacagtt gagaagtgtt ttgtgtggaa atgtgtccaa
4260
gaggcgtcag ctgctgcaca gagaactcac tgcccagaac actgcgcttg gggaacagac
4320
ctcaccacca cctcaaactc gctctccact gggcctgttg gcagccagct cagctgggga
4380

ggggaggcag agccttatcc tcggctgccc ttcttggtc cctgcattcc agggacttgc
1200
tcgtcttggt tacccttagc catcctttct ttcaagggtg aaccaggcct tccaccctga
1260
ccttgcatct ccagactggt ccagagaagg tgcggggcca gctgctatgt ggtggccgct
1320
gtggctgaca ctgagtgaag gtgtttgaaa tgcaggagag gatatcccag caaattggga
1380
tcacatgctt ttgtctccac agcaaccagc cactgcaggc agcatgtctt tctccctg
1440
ctctctgctt gctgttggtt tgacgctatt ctgcttgcct gtcttctggt tgggatgtgg
1500
agttgttgct ggactctcag gcgaagctga agtcattgaa gtgtgtgaag ctctgtgctt
1560
gcctgagggc aagcaaggaa tggctgtgcc tgaggctgct ctgggaaact ccttgcccct
1620
tgacctcttt tgagagcatt cacgtggtct tcttgctcat cccctataa atgtgctttg
1680
cctgcctcag cctcatggct agagcagtg agactggagc cctgtttgca cgttctagtt
1740
gttcggagaa agcctagggt ctgggctcag gtccagatgc agcggggatt ctgttctctg
1800
actgtggcga ccttgctttg gttcttggtg aagtgaacca agcccggcca ccacgcatgg
1860
catgctgtgc ttggctcccc ataagacgtc ctctttgggt gcacgggtgc aaagtgtggg
1920
caggagtggg gagctgggtc cctcaggagg agaccacagc atgtccatca gctcagcaga
1980
gctcgacagc cacaagtcct gagaagcttt gaccttgaag ggcttctggg agaggaggaa
2040
tttctgcatg gggcgtgaag gcacactgtc ccaccacaac tgaaccagaa gagagtgaag
2100
actcccctct tccatcctc tgtgccaggt gccagactgt gctccttgga acttatggc
2160
caatcttacc tgttctccag ggactgggtc ctgcctcagg accccaagc ctatgccctg
2220
agccatggct gctgactgac tccagccaag gtgcaaagac gagattatga gacaggtcct
2280
caggcctgtg ttccaagtac tcacaggggc tctgggtgcc catcgccggg agtatggttc
2340
agctgccacc ggactgtcc atttgctgt ctgtcaagct cagagcatgg ataagccaca
2400
cagcagggca gtgcacctg gcacatgca cggccagcaa gaatcaaggc ccgcagatgc
2460
taagagggcc tattgtcagg ggaaggctcc cgctcctgca cactctctat ggatactgg
2520
gttggtgggg ctctcttgga gagtaagttt gtgggttggt tctgggttac agtggtggct
2580
gacacccctt gtaagaaagc attcctggga agtcttctgt gggccaaac atgttgctcc
2640
gatcatcaca ggagagcaaa aggcctaga taccocctt ggaatgtgag agtcttggtg
2700
tctgatattt gccactgagc tgggtgaagc cctctaaaga gatctcgacc ctggggagca
2760

<400> 5392

Thr Asn Leu Leu Lys Val Asn Lys Gln Tyr Lys Leu Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Arg Gln Gly Leu Ala Leu Ser Phe Arg Leu Lys Cys Ser Gly
 20 25 30
 Thr Ile Lys Gly His Cys Asn Leu Ser Leu Asn Leu Leu Gly Ser Ser
 35 40 45
 Asn Pro Pro Ala Ser Ala Ser
 50 55

<210> 5393

<211> 4837

<212> DNA

<213> Homo sapiens

<400> 5393

nnagtatcta gggcgagg cgacatggag acagggcg cagagctgta tgaccaggcc
 60
 cttttgggca tcttcgagca cgtgggcaac gtccaggatt tcttgccgt tctctttggc
 120
 ttctctacc gcaagacaga cttctatcgc ttgctgcgcc acccatcgga ccgcatgggc
 180
 ttcccgcccc gggccgcgca ggccttggtg ctgcaggat tcaaaacctt tgaccacatg
 240
 gcccgtcagg atgatgagaa gagaaggcag gaacttgaag agaaaatcag aagaaaggaa
 300
 gaggaagagg ccaagactgt gtcagctgct gcagctgaga aggagccagt ccagttcca
 360
 gtccaggaaa tagagattga ctccaccaca gaattggatg ggcatcagga agtagagaaa
 420
 gtgcagcctc caggccctgt gaaggaaatg gcccattggt cacaggaggc agaagctcca
 480
 ggagcagttg ctggtgctgc tgaagtccct aggggaaccac caattcttcc caggattcag
 540
 gagcagttcc agaaaaatcc cgacagttac aatggtgctg tccgagagaa ctacacctgg
 600
 tcacaggact atactgacct ggaggtcagg gtgccagtac ccaagcacgt ggtgaagggg
 660
 aagcaggtct cagtggccct tagcagcagc tccattcgtg tggccatgct ggaggaaaat
 720
 ggggagcgcg tctcatgga agggagctc acccacaaga tcaactactga gagttctctc
 780
 tggagtctcg agcccgaggaa gtgcgttttg gtgaacctga gcaagggtgg cgagtattgg
 840
 tggaaagcca tcttgagggg agaagagccc atcgacattg acaagatcaa caaggagcgc
 900
 tccatggcca ccgtggatga ggaggaaacag gcggtgttgg acaggcttac ctttgactac
 960
 caccagaagc tgcagggcaa gccacagagc catgagctga aagtccatga gatgctgaag
 1020
 aaggggtggg atgetgaagg ttctcccttc cgaggccagc gattcgacct tgccatgttc
 1080
 aacatctccc cgggggctgt gcagttttaa tgaccagaag gaaaggaaac cctcgccggt
 1140

```

                20                25                30
Ile Met Gly Arg Glu Lys Leu Lys Ala Ala Asp Cys Asp Leu Gln Ile
                35                40                45
Thr Asn Ala Gln Thr Lys Glu Glu Tyr Thr Asp Asp Asn Ala Leu Ile
                50                55                60
Pro Lys Asn Ser Ser Val Ile Val Arg Arg Ile Pro Ile Gly Gly Val
                65                70                75                80
Lys Ser Thr Ser Lys Thr Tyr Val Ile Ser Arg Thr Glu Pro Ala Met
                85                90                95
Ala Thr Thr Lys Ala Val Cys Lys Asn Thr Ile Ser His Phe Phe Tyr
                100                105                110
Thr Leu Leu Leu Pro Leu
                115

```

<210> 5391
 <211> 797
 <212> DNA
 <213> Homo sapiens

```

<400> 5391
nggctcaaaa cgatcctctc accttgccctt ccaaagtgcg gggattacag gatgagccac
60
tgcattcagt ctaaaattctc ttttccacat accaaatgaa caaatttatt aaaggtgaat
120
aaacagtaca aattattatt attattatta ttgagacagg gtcttgctct gtcattcagg
180
ctaaagtgca gtggcacaat caagggtcac tgcaacctca gcctcaacct cctgggctca
240
agcaatcctc ctgcctcagc ctcttgagca gcagggacta caggtgcaca ccaccatgtc
300
cagctacttt ttttattctt tgtagagaca gggctctcact acattaccct ggctgggtctc
360
aaacttctgg gctcaaatga tcctcccgcc tcagcctccc aaaactctgg catgagccac
420
tatgtcagc ctcagatatg gatttttatt aagctttttt tttccctacc aattgccagc
480
caatttattt taaaaataca ggtttctggc ttcttttgca aagtcaaacc tggcaaacact
540
ggaccaacat ttccaccagg ctgcaatggt ctgaaactga cttgagccca tgtgcactgg
600
aagggccctg cctctggccc ctctgggact tgtggctgcc ctttagatgg gaatccactt
660
ttctgttcac cgcactctct accgctctct attgcacctg acccagctgc tatataggat
720
agtaacatta attccctggc tccccaaaag catttgagtc tgcaacccat gtgctgggatg
780
gatgtagggg gccacag
797

```

<210> 5392
 <211> 55
 <212> PRT
 <213> Homo sapiens

gcctgggcct ggggaagctg acgccggtcg tccggaagcc aggaggaggc gtgaggccgc
 480
 tcgtggactc cgggcctagg ccctctcccc tcaaccttct cccggggcct gggtcacccc
 540
 aatccacgga gagagagacc cgccgggagg tgcggccgcg ctatggaccc ctgacccccg
 600
 tggggtcgct cggactctta acgtgtggac tgaccgctac tgactgcacc gccaatcccc
 660
 ccgtctctgc cggccccctta gcatgagcga gggggaccca gccgggtgac attgtgcccc
 720
 ttggcggatt ctcgatttcc cctcttcccc gtctctgctc tctctctccc ccatgaagtg
 780
 attctgagta tcgggggggc tctggattat tgttctgacg aaccctgct tgtggttggg
 840
 gggatatttaa tctgaggcct tagggctcctt cgggtgtctt gagtgttttg tgtgtacata
 900
 ttttgccttt aaagtttata aatatacgta tattgagagt gtccacgtct cctcgctgaa
 960
 ccttaggaat cccttggcac catgtcctgt gtgcattata aattttctc taaactcaac
 1020
 tatgataccg tcaccttga tgggctccac atctccctct gcgacttaaa gaagcagatt
 1080
 atggggagag agaagctgaa agctgccgac tgcgacctgc agatcaccaa tgcgcagacg
 1140
 aaagaagaat atactgatga taatgctctg attcctaaga attcttctgt aattgttaga
 1200
 agaattccta ttggaggtgt taaatctaca agcaagacat atgttataag tcgaactgaa
 1260
 ccagcgatgg caactacaaa agcagtatgt aaaaacacaa tctcacactt tttctacaca
 1320
 ttgcttttac ctttataatg tagcagttaa gtaaatcatt ttagaactta atatccaact
 1380
 gatcatagta catattgtaa ataaaatgta ttttgatgac agctcagttg aatatggata
 1440
 atatgtggca tcacttgac acttattttg tagaaatggg taatttgtgc ccgtaacact
 1500
 gtttcatatt aaatatgata gcattatccc tgtatgacac tgtgtgtgac agttaatgta
 1560
 tgatcctttt tagatcgttt aggttttaca ctaaggaaca tgatgacatg ttctacattt
 1620
 gtctgtctat agttagtatt ttgtatgtat gtacaggctg ttgtgtgctt tttgtttctt
 1680
 gcaataaaaa atgtttggag tgtatatttt g
 1711

<210> 5390

<211> 118

<212> PRT

<213> Homo sapiens

<400> 5390

Met Ser Cys Val His Tyr Lys Phe Ser Ser Lys Leu Asn Tyr Asp Thr
 1 5 10 15
 Val Thr Phe Asp Gly Leu His Ile Ser Leu Cys Asp Leu Lys Lys Gln

atgaccctga tcacccatcat cgtggagctg tgcgggctcc aggcccgctt cccctgtct
 180
 tggcgcaact tccccatcac ctccgcctgc tatgcggccc tcttctgct ctgcgcctcc
 240
 atcatctacc ccaccaccta tgtccagttc ctgtcccacg gccgttcgcg ggaccacgcc
 300
 atcgccgcca ccttcttctc ctgcatcgcg tgtgtggctt acgccaccga aatggcctgg
 360
 acccgggccc gggcc
 375

<210> 5388
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 5388
 Xaa Asp Ser Pro Arg Phe Ser Arg Met Ala Met Ala Ala Arg Met Lys
 1 5 10 15
 Gln Met Ala Tyr Thr Ala Thr His Gln Ser Met Gly Asn Trp Ser Met
 20 25 30
 Phe Thr Trp Cys Phe Cys Phe Ser Met Thr Leu Ile Ile Leu Ile Val
 35 40 45
 Glu Leu Cys Gly Leu Gln Ala Arg Phe Pro Leu Ser Trp Arg Asn Phe
 50 55 60
 Pro Ile Thr Phe Ala Cys Tyr Ala Ala Leu Phe Cys Leu Ser Ala Ser
 65 70 75 80
 Ile Ile Tyr Pro Thr Thr Tyr Val Gln Phe Leu Ser His Gly Arg Ser
 85 90 95
 Arg Asp His Ala Ile Ala Ala Thr Phe Ser Cys Ile Ala Cys Val
 100 105 110
 Ala Tyr Ala Thr Glu Met Ala Trp Thr Arg Ala Arg Ala
 115 120 125

<210> 5389
 <211> 1711
 <212> DNA
 <213> Homo sapiens

<400> 5389
 nncgagcggc aggggggcaa acacaaaagg gagccggaga agccctagcc gctgcccagc
 60
 agcttgcggg cgtgttctcg cggttccggg cctcaaggcg acggaaacga aaggcgagcg
 120
 aagcgcgag gatccggcga gaagaagcgt caggagcct cggcggtgtc cccggggtcc
 180
 gccgaagcca cccggccgcc ggctggggcc cggggtggtg aggaagtgtc ccgaggcctc
 240
 gccgaggcct agcgcggct ttgtgtccga ggcggcggcg gcggcggggg gaggcggagc
 300
 cgggggcggc ctgcgggaag gcctctctc cgccgaccgc gcgttttcgg cctaggccgc
 360
 ggggcccgtc gtggcctccg gggagcaggc gccaggggtt tgtgtgcggt gggggcctgg
 420

485 490 495

Glu Val Thr Leu Leu His Phe Leu Gln Glu Tyr Leu
500 505

<210> 5385
<211> 314
<212> DNA
<213> Homo sapiens

<400> 5385
agatctcacg agatggggac cccagctggc actgggtggc atttcttctt cccttgcctt
60
acttgagca tatgttggtc gtggaaccga aaggaacgta gcaaaaagag tgttcccagg
120
cctccccggg cccagccgct gggcagaggg ctgcatgctg gctggctggc caggctgggg
180
cagcctggcc tcctcgggcc ctacgctgca cccaccttc acttcctgga gatgcaccca
240
catctccagg aaaattgttt cagaaaatgc ctacaacaca gcagagagtg gaacaaacag
300
ggtcccaacg catg
314

<210> 5386
<211> 100
<212> PRT
<213> Homo sapiens

<400> 5386
Met Gly Thr Pro Ala Gly Thr Gly Trp His Phe Phe Phe Pro Cys Ser
1 5 10 15
Thr Trp Ser Ile Cys Cys Ser Trp Asn Arg Lys Glu Arg Ser Lys Lys
20 25 30
Ser Val Pro Ser Pro Pro Arg Ala Gln Pro Leu Gly Arg Gly Leu His
35 40 45
Ala Gly Trp Leu Ala Arg Leu Gly Gln Pro Gly Leu Leu Gly Pro Tyr
50 55 60
Ala Ala Pro Thr Phe His Phe Leu Glu Met His Pro His Leu Gln Glu
65 70 75 80
Asn Cys Phe Arg Lys Cys Leu Gln His Ser Arg Glu Trp Asn Lys Gln
85 90 95
Gly Pro Asn Ala
100

<210> 5387
<211> 375
<212> DNA
<213> Homo sapiens

<400> 5387
ntggactccc ccaggttcag caggatggcg atggccgcta ggatgaagca gatggcgta
60
accgccacgc accagtcctat gggcaactgg tccatgttca cctgggtgctt ctgcttctcc
120

```

      50              55              60
Arg Ala Val Pro Arg Asn Val Gln Pro Tyr Val Val Tyr Glu Glu Val
65              70              75              80
Thr Asn Val Trp Ile Asn Val His Asp Ile Phe Tyr Pro Phe Pro Gln
      85              90              95
Ser Glu Gly Glu Asp Glu Leu Cys Phe Leu Arg Ala Asn Glu Cys Lys
      100              105              110
Thr Gly Phe Cys His Leu Tyr Lys Val Thr Ala Val Leu Lys Ser Gln
      115              120              125
Gly Tyr Asp Trp Ser Glu Pro Phe Ser Pro Gly Glu Gly Glu Gln Ser
      130              135              140
Leu Thr Asn Ala Ile Trp Val Asn Glu Glu Thr Lys Leu Val Tyr Phe
145              150              155              160
Gln Gly Thr Lys Asp Thr Pro Leu Glu His His Leu Tyr Val Val Ser
      165              170              175
Tyr Glu Ala Ala Gly Glu Ile Val Arg Leu Thr Thr Pro Gly Phe Ser
      180              185              190
His Ser Cys Ser Met Ser Gln Asn Phe Asp Met Phe Val Ser His Tyr
      195              200              205
Ser Ser Val Ser Thr Pro Pro Cys Val His Val Tyr Lys Leu Ser Gly
      210              215              220
Pro Asp Asp Asp Pro Leu His Lys Gln Pro Arg Phe Trp Ala Ser Met
225              230              235              240
Met Glu Ala Ala Lys Ile Phe His Phe His Thr Arg Ser Asp Val Arg
      245              250              255
Leu Tyr Gly Met Ile Tyr Lys Pro His Ala Leu Gln Pro Gly Lys Lys
      260              265              270
His Pro Thr Val Leu Phe Val Tyr Gly Gly Pro Gln Val Gln Leu Val
      275              280              285
Asn Asn Ser Phe Lys Gly Ile Lys Tyr Leu Arg Leu Asn Thr Leu Ala
      290              295              300
Ser Leu Gly Tyr Ala Val Val Val Ile Asp Gly Arg Gly Ser Cys Gln
305              310              315              320
Arg Gly Leu Arg Phe Glu Gly Ala Leu Lys Asn Gln Met Gly Gln Val
      325              330              335
Glu Ile Glu Asp Gln Val Glu Gly Leu Gln Phe Val Ala Glu Lys Tyr
      340              345              350
Gly Phe Ile Asp Leu Ser Arg Val Ala Ile His Gly Trp Ser Tyr Gly
      355              360              365
Gly Phe Leu Ser Leu Met Gly Leu Ile His Lys Pro Gln Val Phe Lys
      370              375              380
Val Ala Ile Ala Gly Ala Pro Val Thr Val Trp Met Ala Tyr Asp Thr
385              390              395              400
Gly Tyr Thr Glu Arg Tyr Met Asp Val Pro Glu Asn Asn Gln His Gly
      405              410              415
Tyr Glu Ala Gly Ser Val Ala Leu His Val Glu Lys Leu Pro Asn Glu
      420              425              430
Pro Asn Arg Leu Leu Ile Leu His Gly Phe Leu Asp Glu Asn Val His
      435              440              445
Phe Phe His Thr Asn Phe Leu Val Ser Gln Leu Ile Arg Ala Gly Lys
      450              455              460
Pro Tyr Gln Leu Gln Val Ala Leu Pro Pro Val Ser Pro Gln Ile Tyr
465              470              475              480
Pro Asn Glu Arg His Ser Ile Arg Cys Pro Glu Ser Gly Glu His Tyr

```


ggcgagatcg tacgcctcac cacgcccggc ttctcccata gctgctccat gagccagaac
 900
 ttcgacatgt tcgtcagcca ctacagcagc gtgagcacgc cgccctgcgt gcacgtctac
 960
 aagctgagcg gccccgacga cgacccctcg cacaagcagc cccgcttctg ggctagcatg
 1020
 atggaggcag ccaagatctt ccatttccac acgcgctcgg atgtgcggct ctacggcatg
 1080
 atctacaagc cccacgcctt gcagccaggg aagaagcacc ccaccgtcct ctttgatat
 1140
 ggaggccccc aggtgcagct ggtgaataac tccttcaaag gcatcaagta cttgcggctc
 1200
 aacacactgg cctccctggg ctacgccgtg gttgtgattg acggcagggg ctctgtcag
 1260
 cgagggtctc ggttcgaagg ggccctgaaa aaccaaattg gccaggtgga gatcgaggac
 1320
 caggtggagg gcctgcagtt cgtggccgag aagtatggct tcatcgacct gagccgagtt
 1380
 gccatccatg gctggtccta cgggggcttc ctctcgtca tggggctaata ccacaagccc
 1440
 caggtgttca aggtggccat cgcgggtgcc ccggtcaccg tctggatggc ctacgacaca
 1500
 gggtaactg agcgctacat ggacgtccct gagaacaacc agcacggcta tgaggcgggt
 1560
 tccgtggccc tgcacgtgga gaagctgccc aatgagccca accgcttgct tatcctccac
 1620
 ggcttcctgg acgaaaacgt gcactttttc cacacaaact tcctcgtctc ccaactgac
 1680
 cgagcaggga aaccttacca gctccagggt gccctgcctc ctgtctcccc gcagatctac
 1740
 cccaacgaga gacacagtat tcgctgcccc gagtcgggag agcactatga agtcacgttg
 1800
 ctgcactttc tacaggaata cctctgagcc tgcccaccgg gagccgccac atcacagcac
 1860
 aagtggctgc agcctccgag ggggaaccagg cgggaggagc tgagtggccc gggggcccca
 1920
 gtgaggcact ttgtcccgcc cagcgtggc cagccccgag gagccgctgc cttcaccgcc
 1980
 ccgacgcctt ttatcctttt ttaaagctc ttgggtttta tgtccgc
 2027

<210> 5384

<211> 508

<212> PRT

<213> Homo sapiens

<400> 5384

Ile Val Ser Thr Gln Glu Lys Glu Leu Val Gln Pro Phe Ser Ser Leu
 1 5 10 15
 Phe Pro Lys Val Glu Tyr Ile Ala Arg Ala Gly Ala Trp Ala Met Phe
 20 25 30
 Leu Asp Arg Pro Gln Gln Trp Leu Gln Leu Val Leu Pro Pro Ala
 35 40 45
 Leu Phe Ile Pro Ser Thr Glu Asn Glu Glu Gln Arg Leu Ala Ser Ala

65					70					75				80
Gly	Arg	Met	Asp	Asp	Val	Ile	Asn	Ile	Ser	Gly	His	Arg	Leu	Gly Thr
				85					90					95
Ala	Glu	Ile	Glu	Asp	Ala	Ile	Ala	Asp	His	Pro	Ala	Val	Pro	Glu Ser
			100					105					110	
Ala	Val	Ile	Gly	Tyr	Pro	His	Asp	Ile	Lys	Gly	Glu	Ala	Ala	Phe Ala
		115					120					125		
Phe	Ile	Val	Val	Lys	Asp	Ser	Ala	Gly	Asp	Ser	Asp	Val	Val	Val Gln
		130				135					140			
Glu	Leu	Lys	Ser	Met	Val	Ala	Thr	Lys	Ile	Ala	Lys	Tyr	Ala	Val Pro
145					150					155				160
Asp	Glu	Ile	Leu	Val	Val	Lys	Arg	Leu	Pro	Lys	Thr	Arg	Ser	Gly Lys
				165					170					175
Val	Met	Arg	Arg	Leu	Leu	Arg	Lys	Ile	Ile	Thr	Ser	Glu	Ala	Gln Glu
			180					185					190	
Leu	Gly	Asp	Thr	Thr	Thr	Leu	Glu	Asp	Pro	Ser	Ile	Ile	Ala	Glu Ile
		195					200					205		
Leu	Ser	Val	Tyr	Gln	Lys	Cys	Lys	Asp	Lys	Gln	Ala	Ala	Ala	Lys
		210				215					220			

<210> 5383

<211> 2027

<212> DNA

<213> Homo sapiens

<400> 5383

gttgcttcct gtatctcttc tcaagacggc ttccctctat gtgtctatgt ctatgtgtcc
 60
 ccctgtaagg acagcagtc tgcgtgatca gggccaccc tcatccacac aaccttgtct
 120
 taactcagta catctccagt ggccccattt ccaaagaagg ttgcgttctg gggttctggg
 180
 ggctgagact ccagcatatg aatttggggg ggacatgatg ggacccagcg cagtggcctt
 240
 ctccctccgag cagcgccggg caggccaggg catgacccac acctgtttgt ttcccttcag
 300
 atcgtctcga ccaggagaa ggagctggtg cagcccttca gctcgtgtt cccgaagggtg
 360
 gagtacatcg ccaggggcgg cgctggggc atgttcctgg accggcccca gcagtggctc
 420
 cagctcgtcc tcctcccccc ggccctgttc atcccagca cagagaatga ggagcagcgg
 480
 ctacgctctg ccagagctgt cccaggaat gtccagccgt atgtggtgta cgaggaggtc
 540
 accaacgtct ggatcaatgt tcatgacatc ttctatccct tcccccaatc agaggagag
 600
 gacgagctct gctttctccg cgccaatgaa tgcaagaccg gcttctgcca tttgtacaaa
 660
 gtcaccgccc ttttaaaatc ccaggggctac gattggagtg agcccttcag ccccggggaa
 720
 ggtgagcaga gcctgacgaa tgctatctgg gtcaatgagg agaccaagct ggtgtacttc
 780
 cagggcacca aggacacgcc gctggagcac cacctctacg tggtcagcta tgaggcggcc
 840

gatgagatcc tgggtggtgaa acgtcttcca aaaaccaggt ctgggaaggt catgcggcgg
 540
 ctcttgagga agatcatcac tagtgaggcc caggagctgg gagacactac caccttgagg
 600
 gaccccgca tcatcgaga gatcctgagt gtctaccaga agtgcaagga caagcaggct
 660
 gctgctaagt gagctggcac cttgtggggc tcttgggatg ggcgggcacc caagccctgg
 720
 cttgtccttc ccagaaggta cccctgaggt tggcgtcttc ctacgtccca gaagcagccc
 780
 ccacccaca catgaccac accgcctca cgtgaagctg ggctgagagc cctttctccc
 840
 atccattgga ggtccagga gtgtcaccca tggagaggct atgcgacatg gctagggctg
 900
 gttctgccat ctgagtttgg tttcctggaa tgaaaaggca ttgccatctc cattcctctg
 960
 ccctcttgag ccagcacagg aagggtgaggc cctgggatag cgcgcctgct cagataacac
 1020
 agagctagtt agctagtagc aaccgtgttt tctccagatc tgtctagata caaaggctcag
 1080
 aaatcttatt tttatacttt tatattgtgg aagaacagca tgcaacactc acatgtagtg
 1140
 tgtggattta cttgaacatg ttctttttaa catgtagtta tgaaaatctc cttttttgcc
 1200
 tctactgggtg aggaaacatg aggatcagag gccacatttt taattattgt tagtgatttt
 1260
 ggaagtctga attggagatg tttgtacctc tgtctaaaca gtcccttga ggacttccaa
 1320
 gcctccggca tcttttcctg gtgagtgttt ctctgtgct tggttgtgta taatggagct
 1380
 aactcctaag cgggtggggtg aatgtggccg ccttagttct gaagctactc cagttatgtt
 1440
 ctgtttcttc aagctgtgat ccagaaagat ttttgtgcc cccagatgct tcttgatagg
 1500
 agaggcaaca tactccaaat agttgggttc ttcaggaag ctattagaaa ctcagggtgac
 1560
 ttgttagagc actaac
 1576

<210> 5382

<211> 223

<212> PRT

<213> Homo sapiens

<400> 5382

Xaa Met Ala Met Arg Pro Phe Phe Gly Ile Val Pro Val Leu Met Asp
 1 5 10 15
 Glu Lys Gly Ser Val Val Glu Gly Ser Asn Val Ser Gly Ala Leu Cys
 20 25 30
 Ile Ser Gln Ala Trp Pro Gly Met Ala Arg Thr Ile Tyr Gly Asp His
 35 40 45
 Gln Arg Phe Val Asp Ala Tyr Phe Lys Ala Tyr Pro Gly Tyr Tyr Phe
 50 55 60
 Thr Gly Asp Gly Ala Tyr Arg Thr Glu Gly Gly Tyr Tyr Gln Ile Thr

660 665 670
 Pro Pro Ser Phe Gln Pro Ser Ser Pro Ala Pro Val Trp Arg Ser Ser
 675 680 685
 Leu Gly Pro Pro Ala Pro Leu Asp Arg Gly Glu Asn Leu Tyr Tyr Glu
 690 695 700
 Ile Gly Ala Ser Glu Gly Ser Pro Tyr Ser Gly Pro Thr Arg Ser Trp
 705 710 715 720
 Ser Pro Phe Arg Ser Met Pro Pro Asp Arg Leu Asn Ala Ser Tyr Gly
 725 730 735
 Met Leu Gly Gln Ser Pro Pro Leu His Arg Ser Pro Asp Phe Leu Leu
 740 745 750
 Ser Tyr Pro Pro Ala Pro Ser Cys Phe Pro Pro Asp His Leu Gly Tyr
 755 760 765
 Ser Ala Pro Gln His Pro Ala Arg Arg Pro Thr Pro Pro Glu Pro Leu
 770 775 780
 Tyr Val Asn Leu Ala Leu Gly Pro Arg Gly Pro Ser Pro Ala Ser Ser
 785 790 795 800
 Ser Ser Ser Ser Pro Pro Ala His Pro Arg Ser Arg Ser Asp Pro Gly
 805 810 815
 Pro Pro Val Pro Arg Leu Pro Gln Lys Gln Arg Ala Pro Trp Gly Pro
 820 825 830
 Arg Thr Pro His Arg Val Pro Gly Pro Trp Gly Pro Pro Glu Pro Leu
 835 840 845
 Leu Leu Tyr Arg Ala Ala Pro Pro Ala Tyr Gly Arg Gly Gly Glu Leu
 850 855 860
 His Arg Gly Ser Leu Tyr Arg Asn Gly Gly Gln Arg Gly Glu Gly Ala
 865 870 875 880
 Gly Pro Pro Pro Pro Tyr Pro Thr Pro Ser Trp Ser Leu His Ser Glu
 885 890 895
 Gly Gln Thr Arg Ser Tyr Cys
 900

<210> 5381

<211> 1576

<212> DNA

<213> Homo sapiens

<400> 5381

nccatggcga tgaggccctt ctttggcatc gtccccgtcc tcatggatga gaagggcagc
 60
 gtcgtggagg gcagcaacgt ctccggggcc ctgtgcatct cccaggcctg gccgggcatg
 120
 gccaggacca tctatggcga ccaccagcga tttgtggacg cctacttcaa ggcctaccca
 180
 ggctattact tcaactggaga cggggcttac cgaactgagg ggggctatta ccagatcaca
 240
 gggcggatgg atgatgtcat caacatcagt ggccaccggc tggggaccgc agagattgag
 300
 gacgccatcg ccgaccaccc tgcagtacca gaaagtgctg tcattggcta cccccacgac
 360
 atcaaaggag aagctgcctt tgccttcatt gtggtgaaag atagtgcggg tgactcagat
 420
 gtggtggtgc aggagctcaa gtccatggtg gccaccaaga tcgccaaata tgctgtgcct
 480

225					230					235					240
Leu	Thr	His	Val	Asp	Val	Leu	Phe	Ser	Asp	Thr	Phe	Thr	Ser	Ala	Gly
				245					250					255	
Leu	Asp	Pro	Ala	Gly	Arg	Cys	Leu	Leu	Pro	Arg	Pro	Lys	Ser	Leu	Ala
			260					265						270	
Gly	Ser	Cys	Pro	Ser	Thr	Arg	Leu	Leu	Thr	Leu	Glu	Glu	Ala	Gln	Ala
		275					280					285			
Arg	Thr	Gln	Gly	Arg	Leu	Gly	Thr	Pro	Thr	Glu	Pro	Thr	Thr	Pro	Lys
	290					295					300				
Ala	Pro	Ala	Ser	Pro	Ala	Glu	Arg	Arg	Lys	Gly	Glu	Arg	Gly	Glu	Lys
305					310					315					320
Gln	Arg	Lys	Pro	Gly	Gly	Ser	Ser	Trp	Lys	Thr	Phe	Phe	Ala	Leu	Gly
				325					330					335	
Arg	Gly	Pro	Ser	Val	Pro	Arg	Lys	Lys	Pro	Leu	Pro	Trp	Leu	Gly	Gly
		340						345					350		
Thr	Arg	Ala	Pro	Pro	Gln	Pro	Ser	Ala	Trp	Leu	Asp	Asp	Gly	Asp	Glu
	355						360					365			
Leu	Asp	Phe	Ser	Pro	Pro	Arg	Cys	Leu	Glu	Gly	Leu	Arg	Gly	Leu	Asp
	370					375					380				
Phe	Asp	Pro	Leu	Thr	Phe	Arg	Cys	Ser	Ser	Pro	Thr	Pro	Gly	Asp	Pro
385					390					395					400
Ala	Pro	Pro	Ala	Ser	Pro	Ala	Pro	Pro	Ala	Pro	Ala	Ser	Ala	Phe	Pro
				405					410					415	
Pro	Arg	Val	Thr	Pro	Gln	Ala	Ile	Ser	Pro	Arg	Gly	Pro	Thr	Ser	Pro
		420						425					430		
Ala	Ser	Pro	Ala	Ala	Leu	Asp	Ile	Ser	Glu	Pro	Leu	Ala	Val	Ser	Val
	435					440						445			
Pro	Pro	Ala	Val	Leu	Glu	Leu	Leu	Gly	Ala	Gly	Gly	Ala	Pro	Ala	Ser
	450					455					460				
Ala	Thr	Pro	Thr	Pro	Ala	Leu	Ser	Pro	Gly	Arg	Ser	Leu	Arg	Pro	His
465					470					475					480
Leu	Ile	Pro	Leu	Leu	Leu	Arg	Gly	Ala	Glu	Ala	Pro	Leu	Thr	Asp	Ala
				485					490					495	
Cys	Gln	Gln	Glu	Met	Cys	Ser	Lys	Leu	Arg	Gly	Ala	Gln	Gly	Pro	Leu
		500						505					510		
Ala	Arg	Leu	Met	Ala	Leu	Ala	Leu	Ala	Glu	Arg	Ala	Gln	Gln	Val	Ala
	515						520					525			
Glu	Gln	Gln	Ser	Gln	Gln	Glu	Cys	Gly	Gly	Thr	Pro	Pro	Ala	Ser	Gln
	530					535					540				
Ser	Pro	Phe	His	Arg	Ser	Leu	Ser	Leu	Glu	Val	Gly	Gly	Glu	Pro	Leu
545					550					555					560
Gly	Thr	Ser	Gly	Ser	Gly	Pro	Pro	Pro	Asn	Ser	Leu	Ala	His	Pro	Gly
				565					570					575	
Ala	Trp	Val	Pro	Gly	Pro	Pro	Pro	Tyr	Leu	Pro	Arg	Gln	Gln	Ser	Asp
		58													

acccctcata ggggtgccggg tccctggggc cctcctgagc ctctcctgct ctacagggca
 2760
 gccccgccag cctacggaag ggggggagag ctccaccgag ggtccttgta cagaaatgga
 2820
 gggcaaagag gggagggggc tggccccca cccccttacc cactcccag ctggccctc
 2880
 cactctgagg gccagaccg aagctactgc tgagcaccag ctgggagggg cegtcctcc
 2940
 ttcccttcac cctcactgga tcttgccca accaaatccc ttgttttgta tttcttgaa
 3000
 ccccgaccac taccaggt ttctaacttt gtaacttgct tctgatgtgg gtccctaacc
 3060
 tataatctca gcttccctac cctggactga aggtctgccc catccccca ccaccctcca
 3120
 tcctgggggc cctgcacaa atctggggtg ggaggggcta ggctgacccc atcctcctct
 3180
 ccctccagga gccccagca tgtctgacc tgt
 3213

<210> 5380

<211> 903

<212> PRT

<213> Homo sapiens

<400> 5380

Met	Pro	Pro	Thr	Glu	Asp	Arg	Ser	Trp	Trp	Arg	Gly	Lys	Arg	Gly	Phe
1				5				10					15		
Gln	Leu	Cys	His	Gly	Leu	Val	Gly	Ser	Trp	Pro	Ala	Cys	Ser	Ala	Pro
			20				25					30			
Ser	Cys	Ala	Pro	Ala	Leu	Leu	Gly	Ser	Gly	Cys	Gly	Ser	Gly	Glu	Ser
		35				40					45				
Cys	Asp	Arg	Gly	Cys	Leu	Ala	Ile	Leu	Ala	Ser	Thr	Ser	Ala	Thr	
	50			55				60							
Gln	Ala	Arg	Met	Val	Leu	Arg	Cys	Cys	Ser	Glu	Phe	Ile	Glu	Ala	His
65				70				75				80			
Gly	Val	Val	Asp	Gly	Ile	Tyr	Arg	Leu	Ser	Gly	Val	Ser	Ser	Asn	Ile
			85					90				95			
Gln	Arg	Leu	Arg	His	Glu	Phe	Asp	Ser	Glu	Arg	Ile	Pro	Glu	Leu	Ser
		100					105					110			
Gly	Pro	Ala	Phe	Leu	Gln	Asp	Ile	His	Ser	Val	Ser	Ser	Leu	Cys	Lys
	115				120							125			
Leu	Tyr	Phe	Arg	Glu	Leu	Pro	Asn	Pro	Leu	Leu	Thr	Tyr	Gln	Leu	Tyr
	130				135						140				
Gly	Lys	Phe	Ser	Glu	Ala	Met	Ser	Val	Pro	Gly	Glu	Glu	Glu	Arg	Leu
145				150						155				160	
Val	Arg	Val	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg
			165					170					175		
Thr	Leu	Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser
		180					185					190			
Ala	Asn	Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro
	195						200					205			
Asn	Leu	Leu	Arg	Ser	Met	Glu	Leu	Glu	Ser	Val	Gly	Met	Gly	Gly	Ala
	210				215						220				
Ala	Ala	Phe	Arg	Glu	Val	Arg	Val	Gln	Ser	Val	Val	Val	Glu	Phe	Leu

ctggggagcg ccacggagcc cacaactccc aaggccccgg cctcacctgc ggaaaggagg
1140
aaaggggaga gaggggagaa gcagcggaag ccagggggca gcagctggaa gacgttcttt
1200
gcactgggccc ggggccccag tgtccctcga aagaagcccc tgccctggct ggggggcacc
1260
cgtgccccac cgcagccttc agcctggcta gatgatggtg atgagctgga cttcagccca
1320
ccccgtgcc tggagggact ccgggggctg gactttgatc ccttaacctt ccgctgcagc
1380
agccccaccc caggggatcc cgcacctccc gccagcccag cccccccgc cctgcctct
1440
gccttcccac ccagggtgac cccccaggcc atctcgcccc gggggcccac cagccccgcc
1500
tcgcctgctg ccctagacat ctcagagccc ctggctgtat cagtgccacc cgtgtccta
1560
gaactgctgg gggctggggg agcacctgcc tcagccaccc caacaccagc tctcagcccc
1620
ggccggagcc tgcgccccca tctcataccc ctgctgctgc gaggagccga ggccccgctg
1680
actgacgct gccagcagga gatgtgcagc aagctccggg gagcccaggg cccactcgca
1740
cgctcatgg ccctggccct ggctgagcgg gctcagcagg tggccgagca acagagccag
1800
caggagtgtg ggggaccccc acctgcttcc caatccccct tccaccgctc gctgtctctg
1860
gaggtgggcg gggagcccct ggggacctca gggagtgggc cacctcccaa ctccctagca
1920
cacccgggtg cctgggtccc gggaccccc cctacttac caaggcaaca aagtgatggg
1980
agcctgctga ggagccagcg gcccatgggg acctcaagga ggggactccg aggccctgcc
2040
caggtcagtg ccagctcag ggcaggtggc gggggcaggg atgcgccaga ggcagcagcc
2100
cagtccccat gttctgtccc ctcacaggtt cctacccccg gcttcttctc cccagcccc
2160
agggagtgcc tgccaccctt cctcggggtc cccaagccag gcttgtaccc cctgggcccc
2220
ccatccttcc agcccagttc ccagcccca gtctggagga gctctctggg cccccctgca
2280
ccactcgaca ggggagagaa cctgtactat gagatcgggg caagtgaggg gtccccctat
2340
tctggcccca cccgctcctg gagtcccttt cgctccatgc cccccgacag gctcaatgcc
2400
tcctacggca tgcttgacca atcaccccca ctccacaggt cccccgactt cctgctcagc
2460
taccgccag cccctcctg ctttccccct gaccacctg gctactcagc cccccagcac
2520
cctgctcggc gccctacacc gctgagccc ctctacgtca acctagctct agggcccagg
2580
ggtcctcac ctgcctcttc ctctcctct tcccctcctg cccacccccg aagccgttca
2640
gateccggtc cccagtccc ccgccttccc cagaaacaac gggcacctg gggaccccg
2700

290 295 300
 Lys Thr Ile Ala Leu Asn Gly Val Glu Asp Val Arg Thr Val Leu Glu
 305 310 315 320
 His Tyr Ala Leu Glu Asp Asp Pro Leu Ala Ala Phe Lys Gln Arg Gln
 325 330 335
 Ser Arg Leu Glu Gln Glu Glu Gln Arg Leu Ala Glu Leu Ser Lys
 340 345 350
 Ser Asn Lys Gln Asn Leu Phe Leu Gly Ser Leu Thr Ser Arg Leu Trp
 355 360 365
 Pro Arg Ser Lys Gln Pro
 370

<210> 5379
 <211> 3213
 <212> DNA
 <213> Homo sapiens

<400> 5379
 naggcgtcac tcaatatccc tgcagtggcg gccgcccatg tgatcaaacg gtatacagcc
 60
 caggcgccag atgagctgtc ctttgagggtg aggctgtggg gaagcagatt ccagctgggc
 120
 tccccacacc ccctgtctct tctgaccctt ctcttccac ccgccctctc ccaggtggga
 180
 gacattgtct cggatgatga catgccacc acagaggatc ggagctggtg gcggggcaag
 240
 cgaggcttcc agctgtgcca cggcctcgtg ggaagctggc cggcctgctc cgcacctca
 300
 tgcgctcccg cccttctcgg cagcggctgc ggcagcgggg aatcctgca cagagggtgt
 360
 ttggctgca tcttgccgag cacctcagca actcaggcca ggatggtgct gcgctgctgc
 420
 tccgagtcca ttgaggccca cggggtggtg gatgggatct accggctctc aggcgtgtct
 480
 tccaacatcc agaggcttcg gcacgagttt gacagtgaga ggatcccga gctgtctggc
 540
 cctgcattcc tgcaggacat ccacagcgtg tcttccctct gcaagctcta cttccgagag
 600
 ctccgaacc ctctgctcac ctaccagctc tatgggaagt tcagtgggc catgtcagt
 660
 cctggggagg aggagcgtct ggtgcgggtg cacgatgtca tccagcagct gccccacca
 720
 cattacagga ccctggagta cctgctgagg cacctggccc gcatggcgag acacagtgcc
 780
 aacaccagca tgcattgccc caacctggcc attgtctggg caccacaact gctacggtcc
 840
 atggagctgg agtcagtggg aatgggtggc gggcgcggt tccgggaagt tcgggtgag
 900
 tcggtggtgg tggagtttct gctacccat gtggacgtcc tgttcagcga caccttcacc
 960
 tccgccggcc tcgaccctgc aggcgctgc ctgctccca ggcccaagtc ccttgcgggc
 1020
 agctgcccct ccaccgcct gctgacgctg gaggaagccc aggcacgcac ccagggccgg
 1080

gtccaataaa gtacatccca gacgccacac ctgctgtgtc ccgagagtct ccagatgggg
 1260
 gcatcagggt gaggtccggg actcttgggt catcgtccca cagtggctga tcggctgcca
 1320
 agcacagtgg ggggtgctttg ttggatcaga gcagattttt caccctgggtc tcggaatcta
 1380
 aaaaccctcg ctgtgtcttc ctgtgtgttg cgtgatctgt gaaaaatata tctccctctg
 1440
 accaaaaaaa aa
 1452

<210> 5378

<211> 374

<212> PRT

<213> Homo sapiens

<400> 5378

Xaa	Arg	Ala	Gly	Ser	Arg	Phe	Arg	His	Glu	Ile	Ser	Phe	Thr	Trp	Cys
1				5					10					15	
Pro	Ser	Met	Tyr	Leu	Val	Ala	Ala	Ser	Ala	Ala	Val	Phe	Ser	Arg	Leu
			20					25					30		
Arg	Ser	Gly	Leu	Arg	Leu	Gly	Ser	Arg	Gly	Leu	Cys	Thr	Arg	Leu	Ala
		35					40					45			
Thr	Pro	Pro	Arg	Arg	Ala	Pro	Asp	Gln	Ala	Ala	Glu	Ile	Gly	Ser	Arg
	50					55					60				
Gly	Ser	Thr	Lys	Ala	Gln	Gly	Pro	Gln	Gln	Gln	Pro	Gly	Ser	Glu	Gly
65					70					75				80	
Pro	Ser	Tyr	Ala	Lys	Lys	Val	Ala	Leu	Trp	Leu	Ala	Gly	Leu	Leu	Gly
				85					90					95	
Ala	Gly	Gly	Thr	Val	Ser	Val	Val	Tyr	Ile	Phe	Gly	Asn	Asn	Pro	Val
			100						105				110		
Asp	Glu	Asn	Gly	Ala	Lys	Ile	Pro	Asp	Glu	Phe	Asp	Asn	Asp	Pro	Ile
	115						120					125			
Leu	Val	Gln	Gln	Leu	Arg	Arg	Thr	Tyr	Lys	Tyr	Phe	Lys	Asp	Tyr	Arg
	130					135					140				
Gln	Met	Ile	Ile	Glu	Pro	Thr	Ser	Pro	Cys	Leu	Leu	Pro	Asp	Pro	Leu
145					150					155				160	
Gln	Glu	Pro	Tyr	Tyr	Gln	Pro	Pro	Tyr	Thr	Leu	Val	Leu	Glu	Leu	Thr
				165					170					175	
Gly	Val	Leu	Leu	His	Pro	Glu	Trp	Ser	Leu	Ala	Thr	Gly	Trp	Arg	Phe
		180						185					190		
Lys	Lys	Arg	Pro	Gly	Ile	Glu	Thr	Leu	Phe	Gln	Gln	Leu	Ala	Pro	Leu
		195					200					205			
Tyr	Glu	Ile	Val	Ile	Phe	Thr	Ser	Glu	Thr	Gly	Met	Thr	Ala	Phe	Pro
	210					215					220				
Leu	Ile	Asp	Ser	Val	Asp	Pro	His	Gly	Phe	Ile	Ser	Tyr	Arg	Leu	Phe
225					230					235				240	
Arg	Asp	Ala	Thr	Arg	Tyr	Met	Asp	Gly	His	His	Val	Lys	Asp	Ile	Ser
				245					250					255	
Cys	Leu	Asn	Arg	Asp	Pro	Ala	Arg	Val	Val	Val	Val	Asp	Cys	Lys	Lys
		260					265					270			
Glu	Ala	Phe	Arg	Leu	Gln	Pro	Tyr	Asn	Gly	Val	Ala	Leu	Arg	Pro	Trp
	275					280						285			
Asp	Gly	Asn	Ser	Asp	Asp	Arg	Val	Leu	Leu	Asp	Leu	Ser	Ala	Phe	Leu

50						55						60					
Ser	Ser	Leu	Leu	Lys	Lys	Asn	Thr	Cys	Arg	Cys	His	Leu	Pro	Arg	Ile		
65					70					75					80		
Cys	His	Arg	Pro	Arg	Thr	Ile	Ser	Ile	Phe	Asn	Pro	Arg	Asn	His	Thr		
				85					90					95			
Gly	Asp	Gly	Trp	Gly	Met	Phe	Met	Ser	Pro	Phe	Tyr	Arg	Ser	Gly	Asp		
			100					105					110				

<210> 5377

<211> 1452

<212> DNA

<213> Homo sapiens

<400> 5377

```

nctcgagctg ggtcccgatt cagacatgaa atatccttta catgggtgtcc atccatgtat
60
cttgtggcgg cctcggcagc ggtgttctcg cgcttgcgaa gcgggctccg gctcggctcg
120
cgggggactgt gcacgaggtt ggcgacgccg ccccgccggg cccagatca ggccgcagag
180
atcggggagcc gcgggagcac taaggcgcaa gggccacagc agcagccggg ctcagagggg
240
cccagctatg ccaaaaaagt tgcgctctgg cttgctgggc tgcttgagc tgggtgggact
300
gtgagcgctg tctatatctt tggaacaac ccggtggacg aaaatgggag caagattcct
360
gatgagttcg acaatgatcc aattctggta cagcagttgc gccggacata caaatatttc
420
aaagattata gacagatgat catcgagccc accagccctt gccttctccc agaccctctg
480
caggaaccgt actaccagcc accctacacg ctggttttgg agctcaccgg cgctcctctg
540
catcctgagt ggctcgctgg cactggctgg aggtttaaga agcgcccagg catcgagacc
600
ttgttcagc agcttgcccc tttatatgaa attgtcatct ttacgtcaga gactggcatg
660
actcggtttc cactcattga tagtgtggac ccccatggct tcatctccta ccgcctattc
720
cgggacgcca caagatacat ggatggacac catgtaaagg atatttcatg tctgaatcgg
780
gaccagctc gagtagtagt tgtggactgc aagaaggaag ccttccgcct gcagccctat
840
aacggcggtt ccctgcggcc ctgggacggc aactctgatg accgggtctt gttggatctg
900
tctgccttcc tcaagacat tgcactgaat ggtgtggagg acgtgcgaac cgtgctggag
960
cactatgccc tggaggatga cccgctggcg gctttcaaac agcggcaaaag ccggctagag
1020
caggaggagc agcagcgctt ggccgagctc tccaagtcca acaagcagaa cctcttcctt
1080
ggctccctca ccagccgctt gtggcctcgc tccaaacagc cctgaactct gggcctcctc
1140
aaactcagtg cctgggtcca gggccccagt gcttcagac caagacttgg gccaccactt
1200

```

```

      770              775              780
Tyr Val Leu Arg Arg His Ala Leu Ile Val Gln Gly Phe Ser Phe Leu
785              790              795              800
Asn Arg Tyr Leu Ser Leu Arg Gly Pro Cys Gln Glu Ser Phe Tyr Asn
      805              810              815
Leu Gly Arg Gly Leu His Gln Leu Gly Leu Ile His Leu Ala Ile His
      820              825              830
Tyr Tyr Gln Lys Ala Leu Glu Leu Pro Pro Leu Val Val Glu Gly Ile
      835              840              845
Glu Leu Asp Gln Leu Asp Leu Arg Arg Asp Ile Ala Tyr Asn Leu Ser
      850              855              860
Leu Ile Tyr Gln Ser Ser Gly Asn Thr Gly Met Ala Gln Thr Leu Leu
865              870              875              880
Tyr Thr Tyr Cys Ser Ile
      885

```

<210> 5375
 <211> 526
 <212> DNA
 <213> Homo sapiens

<400> 5375
 ctctaggaac ccctccaagt ggctcgggtgt cgccctcagc ttttctaaag ggatggatga
 60
 taggggtcagg ggtagaggat ttgtgatacct tcaagtttgc agggcttccc gtgttctaag
 120
 tggtaacgat ctgtcttctg caaatggggtt acagcgtgct gctgccagtt ctgaatcccc
 180
 agtagcccg g acttggtgct agttgaaatc catttccctt tttgccttta gtgaggcatc
 240
 cccctcctcc ttattaaaga agaatacatg tcgctgccat ttgccacgta ttgccatag
 300
 acccaggact attagcatct ttaacccacg taaccacact ggggatggct ggggaatggt
 360
 catgtcccca ttttacagga gtggtgatta aggctcaaag gatggaggtg atggatcaaa
 420
 gtcgtctgcc aagtgggtggc agcattgggt ctcagaccga ggcccgtcta cacagtgtctg
 480
 tgccctcctcc caccacgaat gcacgtggcc cactctgccc acgcgt
 526

<210> 5376
 <211> 112
 <212> PRT
 <213> Homo sapiens

```

<400> 5376
Met Asp Asp Arg Val Arg Gly Arg Gly Phe Val Ile Leu Gln Val Cys
  1              5              10              15
Arg Ala Ser Arg Val Leu Ser Gly Asn Asp Leu Ser Ser Ala Asn Gly
      20              25              30
Leu Gln Arg Ala Ala Ala Ser Ser Glu Ser Pro Val Ala Arg Thr Trp
      35              40              45
Val Gln Leu Lys Ser Ile Ser Leu Phe Ala Phe Ser Glu Ala Ser Pro

```

340 345 350
 Ser Gly Ile Val Leu Glu Lys Lys Thr Ser Glu Glu Gly Thr Ser Glu
 355 360 365
 Glu Asn Lys Ala Pro Glu Asn Val Thr Cys Thr Ile Pro Asp Gly Val
 370 375 380
 Pro Ile Asp Ile Thr Val Lys Leu Met Val Cys Leu Val His Leu Asn
 385 390 395 400
 Ile Leu Glu Pro Leu Asn Pro Leu Leu Thr Thr Leu Val Glu Gln Asn
 405 410 415
 Pro Glu Asp Met Gly Asp Leu Tyr Leu Asp Val Ala Glu Ala Phe Leu
 420 425 430
 Asp Val Gly Glu Tyr Asn Ser Ala Leu Pro Leu Leu Ser Ala Leu Val
 435 440 445
 Cys Ser Glu Arg Tyr Asn Leu Ala Val Val Trp Leu Arg His Ala Glu
 450 455 460
 Cys Leu Lys Ala Leu Gly Tyr Met Glu Arg Ala Ala Glu Ser Tyr Gly
 465 470 475 480
 Lys Val Val Asp Leu Ala Pro Leu His Leu Asp Ala Arg Ile Ser Leu
 485 490 495
 Ser Thr Leu Gln Gln Gln Leu Gly Gln Pro Glu Lys Ala Leu Glu Ala
 500 505 510
 Leu Glu Pro Met Tyr Asp Pro Asp Thr Leu Ala Gln Asp Ala Asn Ala
 515 520 525
 Ala Gln Gln Glu Leu Lys Leu Leu Leu His Arg Ser Thr Leu Leu Phe
 530 535 540
 Ser Gln Gly Lys Met Tyr Gly Tyr Val Asp Thr Leu Leu Thr Met Leu
 545 550 555 560
 Ala Met Leu Leu Lys Val Ala Met Asn Arg Ala Gln Val Cys Leu Ile
 565 570 575
 Ser Ser Ser Lys Ser Gly Glu Arg His Leu Tyr Leu Ile Lys Val Ser
 580 585 590
 Arg Asp Lys Ile Ser Asp Ser Asn Asp Gln Glu Ser Ala Asn Cys Asp
 595 600 605
 Ala Lys Ala Ile Phe Ala Val Leu Thr Ser Val Leu Thr Lys Asp Asp
 610 615 620
 Trp Trp Asn Leu Leu Leu Lys Ala Ile Tyr Ser Leu Cys Asp Leu Ser
 625 630 635 640
 Arg Phe Gln Glu Ala Glu Leu Leu Val Asp Ser Ser Leu Glu Tyr Tyr
 645 650 655
 Ser Phe Tyr Asp Asp Arg Gln Lys Arg Lys Glu Leu Glu Tyr Phe Gly
 660 665 670
 Leu Ser Ala Ala Ile Leu Asp Lys Asn Phe Arg Lys Ala Tyr Asn Tyr
 675 680 685
 Ile Arg Ile Met Val Met Glu Asn Val Asn Lys Pro Gln Leu Trp Asn
 690 695 700
 Ile Phe Asn Gln Val Thr Met His Ser Gln Asp Val Arg His His Arg
 705 710 715 720
 Phe Cys Leu Arg Leu Met Leu Lys Asn Pro Glu Asn His Ala Leu Cys
 725 730 735
 Val Leu Asn Gly His Asn Ala Phe Val Ser Gly Ser Phe Lys His Ala
 740 745 750
 Leu Gly Gln Tyr Val Gln Ala Phe Arg Thr His Pro Asp Glu Pro Leu
 755 760 765
 Tyr Ser Phe Cys Ile Gly Leu Thr Phe Ile His Met Ala Ser Gln Lys

ctgggccaat caggagtttc ctcccgctt ccttggaat ttcagacttg aaatagttca
 4200
 tgtagggcca gaacttcaga a
 4221

<210> 5374

<211> 886

<212> PRT

<213> Homo sapiens

<400> 5374

Met	Ser	Gly	Phe	Ser	Pro	Glu	Leu	Ile	Asp	Tyr	Leu	Glu	Gly	Lys	Ile
1				5					10					15	
Ser	Phe	Glu	Glu	Phe	Glu	Arg	Arg	Arg	Glu	Glu	Arg	Lys	Thr	Arg	Glu
		20						25					30		
Lys	Lys	Ser	Leu	Gln	Glu	Lys	Gly	Lys	Leu	Ser	Ala	Glu	Glu	Asn	Pro
		35					40					45			
Asp	Asp	Ser	Glu	Val	Pro	Ser	Ser	Ser	Gly	Ile	Asn	Ser	Thr	Lys	Ser
	50					55					60				
Gln	Asp	Lys	Asp	Val	Asn	Glu	Gly	Glu	Thr	Ser	Asp	Gly	Val	Arg	Lys
65					70					75					80
Ser	Val	His	Lys	Val	Phe	Ala	Ser	Met	Leu	Gly	Glu	Asn	Glu	Asp	Asp
				85					90					95	
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Thr
			100					105					110		
Pro	Glu	Gln	Pro	Thr	Ala	Gly	Asp	Val	Phe	Val	Leu	Glu	Met	Val	Leu
		115					120					125			
Asn	Arg	Glu	Thr	Lys	Lys	Met	Met	Lys	Glu	Lys	Arg	Pro	Arg	Ser	Lys
	130					135					140				
Leu	Pro	Arg	Ala	Leu	Arg	Gly	Leu	Met	Gly	Glu	Ala	Asn	Ile	Arg	Phe
145					150					155					160
Ala	Arg	Gly	Glu	Arg	Glu	Glu	Ala	Ile	Leu	Met	Cys	Met	Glu	Ile	Ile
				165					170					175	
Arg	Gln	Ala	Pro	Leu	Ala	Tyr	Glu	Pro	Phe	Ser	Thr	Leu	Ala	Met	Ile
			180					185					190		
Tyr	Glu	Asp	Gln	Gly	Asp	Met	Glu	Lys	Ser	Leu	Gln	Phe	Glu	Leu	Ile
		195				200						205			
Ala	Ala	His	Leu	Asn	Pro	Ser	Asp	Thr	Glu	Glu	Trp	Val	Arg	Leu	Ala
	210					215					220				
Glu	Met	Ser	Leu	Glu	Gln	Asp	Asn	Ile	Lys	Gln	Ala	Ile	Phe	Cys	Tyr
225					230					235					240
Thr	Lys	Ala	Leu	Lys	Tyr	Glu	Pro	Thr	Asn	Val	Arg	Tyr	Leu	Trp	Glu
			245						250					255	
Arg	Ser	Ser	Leu	Tyr	Glu	Gln	Met	Gly	Asp	His	Lys	Met	Ala	Met	Asp
			260					265					270		
Gly	Tyr	Arg	Arg	Ile	Leu	Asn	Leu	Leu	Ser	Pro	Ser	Asp	Gly	Glu	Arg
		275				280						285			
Phe	Met	Gln	Leu	Ala	Arg	Asp	Met	Ala	Lys	Ser	Tyr	Tyr	Glu	Ala	Asn
	290					295					300				
Asp	Val	Thr	Ser	Ala	Ile	Asn	Ile	Ile	Asp	Glu	Ala	Phe	Ser	Lys	His
305					310					315					320
Gln	Gly	Leu	Val	Ser	Met	Glu	Asp	Val	Asn	Ile	Ala	Ala	Glu	Leu	Tyr
			325						330					335	
Ile	Ser	Asn	Lys	Gln	Tyr	Asp	Lys	Ala	Leu	Glu	Ile	Ile	Thr	Asp	Phe

tgccaggaat cattctacaa tttgggccgt ggccttcac agttggggct gattcatctt
2580
gcaatccact attatcagaa ggccttgag ctccctccac ttgtggtaga gggatatagaa
2640
cttgaccagt tagacttacg aagagatatt gcctacaact tgtctctcat ctatcagagc
2700
agtgggaata ccggaatggc tcaaacgctt ttgtatacct attgttctat ataaagcacc
2760
gcaactgaga acagagcaat ggcagctgct gtgtgaggac cagtgtcttc tgtctcaggg
2820
cttattatctt gtaactccaa aatagaaatg acaatttcag aattaccta caaacagtgt
2880
atttattttt aatatgtgat aatgatcttg tggatatata gcaaaattat tcctacaaaa
2940
atttgtatat tggctgtgca ttttccttcc acattctata gtgaattggt cccaatgttg
3000
aaatggacgt gtaagccttt gagctagctt ggagtcgaat acactatttt tcaactcacac
3060
catttattca tctttgtatt taatactata gctctgtcaa tatcacatga ggcagttttt
3120
caaatacgt taaacagagg ttgcttatta ttaaaggaaa gacaaagtgg gactctttat
3180
gatgtcatga ccatgataac taagcaccta agaaaattat taaaatagt tatgtggtag
3240
gcagaaaagac aaataattta gttttttact tttcaccagc atgtatctta gctaccta
3300
ctgaaacatg ggaggctggg cttaattcaa aatatattgc tccaaggcaa ataaaaaat
3360
gctttatcta tttttgtggc tttctgatga aaaaatagag aagagcttgt tcaataacag
3420
gacatgggtt ccatttcaag atcacaagta atataagact gggcaagtag tacgtatgga
3480
ataaaggaca tactgctgat tgataaagta aaaaactttt tttttttgtt tgtttactca
3540
tctccactat ttattatatg ttcttgaatt taagttaaca gtacttttta gatgatatac
3600
tgtagctta ataacaactt tttagggaaa aataaatgct gtaattaatg tgcacatggg
3660
ttagtaacac ccagcccaat tgtgggaggg aaacaagtag aggcttagga tcaaagaaat
3720
aaaattggga cttattagaa attcttacca ctgtttctac tgtacacaaa actttctagt
3780
tgagcagaat ttgtatgcaa taagtaaata tattgtatac tccatgtgta taatttaaat
3840
gcattttatt ttataattg aggttaactg tttcacatgc ttaattttta ctttatgcca
3900
tttataggta atggtagagg taactgagat acagtaataa gttagacttg tgtgttgga
3960
ttctgtggaa ctgagcattc tgtgctccga gtttctctct taaattagct cactggactg
4020
tggctccagt gtctactaaa tagccgtgga ggaaataagt ctccctgttt tatgcactga
4080
gactctgctg ctctgcatg atcacagttg atcgaggagg gagtctgctc ctgaaccaac
4140

gccatggatg gttataggcg tattttaaac cttttgtctc catctgatgg cgaacgtttt
960
atgcagctgg ctagagatat ggcaaagagt tactatgaag ccaatgatgt tacttctgct
1020
attaacataa ttgatgaagc tttctcaaaa caccagggcc tagtctccat ggaagatggt
1080
aacatagcag ctgaactata tatttctaac aaacagtatg acaaagcttt ggagataatt
1140
acagattttt ctggaattgt gctggaaaaa aaaacttcag aagaaggcac ctcagaagag
1200
aataaagctc ctgagaatgt tacctgcact atacctgatg gcgtgccaat agatatcaca
1260
gtgaagttag tggctcgctt tgtacatctc aacattcttg aaccacttaa tcctctcttg
1320
acaacactag tagaacagaa tcctgaagat atgggagacc tatacctaga tgttgctgaa
1380
gcttttctgg atgttggtga atataattct gcacttcccc tcctcagtgc tcttgtttgc
1440
tctgaaagat acaaccttgc agtagtttgg cttcgtcatg cagaatgttt aaaggcctta
1500
ggctatatgg agcgagctgc tgaaagctat ggcaagggtg ttgatctggc cccactccat
1560
ttggatgcaa ggatttcact ttctaccctt cagcagcagc tgggccagcc tgagaaagct
1620
ctggaagctc tggaaccaat gtatgatcca gatactttag cacaggatgc aaatgctgca
1680
cagcaggaac tgaagttatt gcttcacgtt tctactctgt tgttttcaca aggcaaaatg
1740
tatggttatg tggatacctt acttactatg ttagccatgc ttttaaagggt agcaatgaat
1800
cgagcccaag tttgtttgat atccagttcc aagtctggag agaggcatct ttatcttatt
1860
aaagtatcga gagacaaaat atcagacagc aatgaccaag agtcagcaaa ttgtgatgca
1920
aaagcaatat ttgctgtgct cacaagcgtc ttgacaaagg atgactggtg gaatcttctg
1980
ttgaaggcca tatactcctt atgtgaccta tcccgatctc aagaggctga gttgcttgta
2040
gattcctcat tggaatatta ctcatTTTTat gatgacaggc aaaaacgcaa agaactagaa
2100
tactttggtc tgtctgctgc aattctggac aaaaatttca gaaaggcata caactatata
2160
aggataatgg taatggaaaa tgtcaataaa cccagctctt ggaacatttt caatcaagtt
2220
accatgcact cccaagatgt acgacatcat cgcttctgtc tccgtttgat gctgaaaaac
2280
ccagaaaatc atgccctatg tgtcttaaat ggacacaatg catttgatc tggtagtttt
2340
aagcatgcgc ttggacagta tgtgcaagcc ttctgcactc accctgacga acctctctat
2400
agcttctgta taggcctaac ctttattcat atggcatctc agaagtatgt gttacggaga
2460
catgctctta ttgtacaggg cttttccttt cttaatcgat acctcagttt acgtgggccc
2520

225		230		235		240
Tyr Arg Arg Asp Val His Gln Val Ala Cys Tyr Ser Cys Thr Ser Gly						
	245		250			255
Gln Trp Ser Ser Val Cys Pro Leu Pro Ala Gly His Gly Glu Pro Gly						
	260		265			270
Ile Ala Val Leu Asp Asn Arg Ile Tyr Val Leu Gly Gly Arg Ser His						
	275		280			285
Asn Arg Gly Ser Arg Thr Gly Tyr Val His Ile Tyr Asp Val Glu Lys						
	290		295			300
Asp Cys Trp Glu Glu Gly Pro Gln Leu Asp Asn Ser Ile Ser Gly Leu						
305		310		315		320
Ala Ala Cys Val Leu Thr Leu Pro Arg Ser Leu Leu Leu Glu Pro Pro						
	325		330			335
Arg Gly Thr Pro Asp Arg Ser Gln Ala Asp Pro Asp Phe Ala Ser Glu						
	340		345			350
Val Met Ser Val Ser Asp Trp Glu Phe Asp Asn Ser Ser Glu Asp						
	355		360			365

<210> 5373

<211> 4221

<212> DNA

<213> Homo sapiens

<400> 5373

cgggtgctggc cccggcgagg tagcttctgg aaggcgctgc tcttcgggtt ctctgtcccg
 60
 gttcctgggg ttgcacagac agaccctgta aacatgtcag ggttcagtcc ggaactcatc
 120
 gactacttgg aagggaaaat ctcccttgag gagttcgaac ggcggagaga agagagaaaa
 180
 acccgcgaga agaaaagtct tcaggaaaaa ggcaagttat cagctgaaga aaatcccgat
 240
 gactctgaag ttccatcatc atcaggaatt aactctacca aatcccaaga caaagatgtc
 300
 aatgaaggag aaacatcaga tggagtgagg aagtcagttc acaagggtctt tgcttccatg
 360
 cttggagaga atgaagatga tgaggaggaa gaggaagaag aggaggagga ggaggaggag
 420
 gaagaaacac ctgagcaacc cactgcgggc gatgtatttg tattggagat ggttctcaat
 480
 cgtgaaacca agaaaatgat gaaagagaaa aggcctcgga gtaaacttcc cagagctctg
 540
 agagggtctca tgggtgaagc caacattcgt tttgctcgag gagaacgtga agaggcgata
 600
 ttgatgtgca tggaaatcat aagacaagct cctctggctt atgagccatt ctctactcta
 660
 gccatgatat atgaggacca aggtgacatg gaaaaatcat tgcagtttga gttgattgct
 720
 gcgcatttaa atcccagtga cacagaagaa tgggttagac tggcagaaat gtctctggaa
 780
 caagacaata ttaagcaggc tattttttgc tatacaaaag ctcttaaata tgaacctact
 840
 aatgtccggt atctgtggga gcgatcaagc ctttatgaac agatgggtga tcataaaatg
 900

ggcattggcaa cctcctcaa caagctgtat gtgatcgggg gcagcaacaa cgatgccgga
 720
 tacaggaggg acgtgcacca ggtggcctgc tacagctgca cgtctggaca gtggtcatct
 780
 gtctgcccac tccctgctgg gcacggtgag cctggcattg ctgtgctgga caacaggatc
 840
 tatgtgttag gtggccgctc acacaaccgc ggcagccgca caggctacgt gcacatttac
 900
 gatgtggaga aggactgctg ggaggaaggg cccagctgg acaactccat ctcaggcctg
 960
 gcggcctgtg tgctcaccct gcccgcctcc ctgctccttg agccgccccg cgggaccctc
 1020
 gaccgcagcc aggccgaccc ggactttgcc tctgaggtga tgagtgtgtc tgactgggag
 1080
 gagtttgaca actccagtga ggactaggct ccctgtgcct ggcattcagag ggaagggagg
 1140
 ctggggctgc agggcagtga aacccacgca gcctagg
 1177

<210> 5372

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5372

Xaa	His	Ser	Ala	Ser	Ala	Leu	Met	Tyr	His	Arg	Asn	Glu	Ser	Leu	Gln
1				5					10					15	
Pro	Ser	Leu	Gln	Ser	Pro	Gln	Thr	Glu	Leu	Arg	Ser	Asp	Phe	Gln	Cys
		20						25					30		
Val	Val	Gly	Phe	Gly	Gly	Ile	His	Ser	Thr	Pro	Ser	Thr	Val	Leu	Ser
		35				40						45			
Asp	Gln	Ala	Lys	Tyr	Leu	Asn	Pro	Leu	Leu	Gly	Glu	Trp	Lys	His	Phe
	50					55					60				
Thr	Ala	Ser	Leu	Ala	Pro	Arg	Met	Ser	Asn	Gln	Gly	Ile	Ala	Val	Leu
65					70					75				80	
Asn	Asn	Phe	Val	Tyr	Leu	Ile	Gly	Gly	Asp	Asn	Asn	Val	Gln	Gly	Phe
			85					90					95		
Arg	Ala	Glu	Ser	Arg	Cys	Trp	Arg	Tyr	Asp	Pro	Arg	His	Asn	Arg	Trp
		100						105					110		
Xaa	Pro	Asp	Pro	Val	Pro	Ala	Ala	Gly	Ala	Arg	Arg	Pro	Val	Xaa	Val
	115					120						125			
Cys	Val	Val	Gly	Arg	Tyr	Ile	Tyr	Ala	Val	Ala	Gly	Arg	Asp	Tyr	His
	130					135					140				
Asn	Asp	Leu	Asn	Ala	Val	Glu	Arg	Tyr	Asp	Pro	Ala	Thr	Asn	Ser	Trp
145				150					155					160	
Ala	Tyr	Val	Ala	Pro	Leu	Lys	Arg	Glu	Val	Tyr	Ala	His	Ala	Gly	Ala
			165					170					175		
Thr	Leu	Glu	Gly	Lys	Met	Tyr	Ile	Thr	Cys	Gly	Arg	Arg	Gly	Glu	Asp
		180						185					190		
Tyr	Leu	Lys	Glu	Thr	His	Cys	Tyr	Asp	Pro	Gly	Ser	Asn	Thr	Trp	His
	195					200						205			
Thr	Leu	Ala	Asp	Gly	Pro	Val	Arg	Arg	Ala	Trp	His	Gly	Met	Ala	Thr
	210					215					220				
Leu	Leu	Asn	Lys	Leu	Tyr	Val	Ile	Gly	Gly	Ser	Asn	Asn	Asp	Ala	Gly

<211> 148
 <212> PRT
 <213> Homo sapiens

<400> 5370
 Met Lys Asp Leu Asp Ala Ile Lys Leu Phe Val Gly Gln Ile Pro Arg
 1 5 10 15
 His Leu Asp Glu Lys Asp Leu Lys Pro Leu Phe Glu Gln Phe Gly Arg
 20 25 30
 Ile Tyr Glu Leu Thr Val Leu Lys Asp Pro Tyr Thr Gly Met His Lys
 35 40 45
 Gly Gly Arg Pro Ala Pro Ser Pro Leu Ser Pro Ser Leu Arg Leu Pro
 50 55 60
 Pro His Leu Pro Ala Ser Ser Leu Pro His His His Pro Ser Ser Ala
 65 70 75 80
 His Leu Pro Pro Leu Pro Ala Ser Ala Gly Ala Ser Val Leu Thr Pro
 85 90 95
 Ser Leu Pro Pro Thr Pro Pro Pro Leu Ser Gly Gly Ala Ala Asp Arg
 100 105 110
 Ser Glu Arg Ala Pro Ser Pro Pro Pro Pro Leu Pro Pro Ser Pro
 115 120 125
 Pro Ser Gly Ile Ser Ser Leu Ser Pro Ser Leu Ser Pro Ser Leu Ser
 130 135 140
 Pro Phe Leu Phe
 145

<210> 5371
 <211> 1177
 <212> DNA
 <213> Homo sapiens

<400> 5371
 nnacacagtg ccagcgccct catgtaccac cggaacgaga gcctacagcc cagcctgcag
 60
 agcccgcaaa cggagctgcy gtcggacttc cagtgcgttg tgggcttcgg gggcattcac
 120
 tccacgccgt ccaactgtcct cagcgaccag gccaaagtatc taaacccctt actgggagag
 180
 tggaagcact tcaactgcctc cctggccccc cgcatgtcca accagggcat cgcggtgctc
 240
 aacaacttcg tatacttgat tggaggggac aacaatgtcc aaggatttcg agcagagtcc
 300
 cgatgctgga ggtatgacct acggcacaac cgctggnttc cagatccagt ccctgcagca
 360
 ggagcacgcc gacctgtcnn cgtgtgtgtt gtaggcaggt acatctacgc tgtggcgggc
 420
 cgtgactacc acaatgacct gaatgctgtg gagcgctacg accctgccac caactcctgg
 480
 gcatactgga cccactcaa gagggaggtg tatgcccacg caggcgcgac gctggagggg
 540
 aagatgtata tcacctgcgg ccgcagaggg gaggattacc tgaaagagac aactgctac
 600
 gatccaggca gcaacacttg gcacacactg gctgatgggc ctgtgcggcg cgctggcac
 660

<211> 137
 <212> PRT
 <213> Homo sapiens

<400> 5368
 Met Leu Pro Pro Lys Pro Pro Thr Phe Gly Glu Phe Leu Ser Gln His
 1 5 10 15
 Lys Ala Glu Ala Ser Ser Arg Arg Arg Arg Lys Ser Ser Arg Pro Gln
 20 25 30
 Ala Lys Ala Ala Pro Arg Ala Tyr Ser Asp His Asp Asp Arg Trp Glu
 35 40 45
 Thr Lys Glu Gly Ala Ala Ser Pro Ala Pro Glu Thr Pro Gln Pro Thr
 50 55 60
 Ser Pro Glu Thr Ser Pro Lys Glu Thr Pro Met Gln Pro Pro Glu Ile
 65 70 75 80
 Pro Ala Pro Ala His Arg Pro Pro Glu Asp Glu Gly Glu Glu Asn Glu
 85 90 95
 Gly Glu Glu Asp Glu Glu Trp Glu Asp Ile Ser Glu Asp Glu Glu Glu
 100 105 110
 Glu Glu Ile Glu Val Glu Glu Gly Asp Glu Glu Glu Pro Ala Gln Asp
 115 120 125
 His Gln Ala Pro Glu Ala Ala Pro Thr
 130 135

<210> 5369
 <211> 646
 <212> DNA
 <213> Homo sapiens

<400> 5369
 ngggaggcgg gaggcgcggc cgccgctcca gctgcgagtc cgcccgcgc ccgcgcgcgc
 60
 cgccgcgcgc tcggtccgc gcccgccatg gcccgctga cggagagcga ggcgcgcgcg
 120
 cagcagcagc agctcctgca gccgcggccc tcgcccgtgg gcagcagcgg gcccgagccc
 180
 cccggggggc agcccgcgcg catgaaggac ctggacgcca tcaaactctt cgtggggccag
 240
 atcccgcgcg acctggacga gaaggacctc aagccgctct tcgagcagtt cggccgcac
 300
 tacgagctca cgggtgctcaa agaccctac acgggggatgc acaaagggtg gcgcccggcc
 360
 ccctccccc tctcccccct cctccgcctc ccacccacc ttccggcacc ttctctcccc
 420
 catcaccatc cctcctctgc tcacctcct cctctgctg cctctgcgcg agcatcggtt
 480
 cttacccctt ccctccacc caccctcct cccctctctg ggggtgcagc tgacagatcc
 540
 gagcggggcc cctcccccct tccgccccct ctccctcctt cccacacctt cggcatctcc
 600
 tctctctctc cctctctctc tccctctctc tctcccttct tcttct
 646

<210> 5370

275 280 285
 Val Leu Arg Gly Phe Leu Glu Asp Val Val Pro Asp Ala Thr Ser Ala
 290 295 300
 Tyr Pro Tyr Leu Leu Leu Tyr Glu Ser Arg Gln Arg Arg Tyr Leu Gly
 305 310 315 320
 Ser Ser Pro Glu Gly Ser Gly Phe Cys Ser Lys Asp Arg Phe Val Ala
 325 330 335
 Tyr Pro Cys Ala Val Gly Gln Thr Ala Phe Ser Ser Gly Arg His Tyr
 340 345 350
 Trp Glu Val Gly Met Asn Ile Thr Gly Asp Ala Leu Trp Ala Leu Gly
 355 360 365
 Val Cys Arg Asp Asn Val Ser Arg Lys Asp Arg Val Leu Lys Cys Pro
 370 375 380
 Glu Asn Gly Phe Trp Val Val Gln Leu Ser Lys Gly Thr Lys Tyr Leu
 385 390 395 400
 Ser Thr Phe Ser Ala Leu Thr Pro Val Met Leu Met Glu Pro Pro Ser
 405 410 415
 His Met Gly Ile Phe Leu Asp Phe Glu Ala Gly Glu Val Ser Phe Tyr
 420 425 430
 Ser Val Ser Asp Gly Ser His Leu His Thr Tyr Ser Gln Ala Thr Phe
 435 440 445
 Pro Gly Pro Leu Gln Pro Phe Phe Cys Leu Gly Ala Pro Lys Ser Gly
 450 455 460
 Gln Met Val Ile Ser Thr Val Thr Met Trp Val Lys Gly
 465 470 475

<210> 5367

<211> 549

<212> DNA

<213> Homo sapiens

<400> 5367

nntcctcttc cccctcattc tcttccccct cgtcttcagg aggccgggtgg gcaggagctg
 60
 ggatctcggg tggctgcatg cgtgtctcct tgggggaagt ctcgggggaa gtaggctgtg
 120
 gagtctcagg ggctggggat gctgcccccg aagcccccta cttttgggga gttcctgtcc
 180
 cagcacaaag ctgaggccag cagccgcaga aggagaaaga gcagtcggcc ccaggccaag
 240
 gcagcgccca gggcctacag tgaccatgat gaccgctggg agacaaaaga aggggcagca
 300
 tccccagccc ctgagactcc acagcctact tccccgaga cttcccccaa ggagacaccc
 360
 atgcagccac ccgagatccc agctcctgcc caccggcctc ctgaagacga gggggaagag
 420
 aatgaggggg aagaggatga agaattgggag gacataagtg aggatgagga agaggaggag
 480
 atcgaggtgg aagaaggtga tgaggaggaa ccagcccaag accaccaagc cccagaggct
 540
 gccccacc
 549

<210> 5368

cagatgggtca tctccacagt gaccatgtgg gtgaaaggat agacacagac cgggggactc
 1560
 gggcactgct cctggctctg cagaagggtg gggccttctg cttactgcag gccacctgcc
 1620
 agggttctct ggcacacgc tggcagccat tagacacaca gggggggttc tcaaattcta
 1680
 aatataattg tgattagaac tgtcaaacat taagagggtg tactgacaga tgcttcctag
 1740
 aggaaacttt tgaaagcccc tgcgttctga gtggaccgat ttctaaatcc atacctacac
 1800
 accaaaaaaa aaaaaaagtc gaggc
 1824

<210> 5366

<211> 477

<212> PRT

<213> Homo sapiens

<400> 5366

Met	Glu	Ala	Val	Glu	Leu	Ala	Arg	Lys	Leu	Gln	Glu	Glu	Ala	Thr	Cys
1				5				10					15		
Ser	Ile	Cys	Leu	Asp	Tyr	Phe	Thr	Asp	Pro	Val	Met	Thr	Thr	Cys	Gly
			20					25					30		
His	Asn	Phe	Cys	Arg	Ala	Cys	Ile	Gln	Leu	Ser	Trp	Glu	Lys	Ala	Arg
			35				40					45			
Gly	Lys	Lys	Gly	Arg	Arg	Lys	Arg	Lys	Gly	Ser	Phe	Pro	Cys	Pro	Glu
			50				55				60				
Cys	Arg	Glu	Met	Ser	Pro	Gln	Arg	Asn	Leu	Leu	Pro	Asn	Arg	Leu	Leu
65					70				75					80	
Thr	Lys	Val	Ala	Glu	Met	Ala	Gln	Gln	His	Pro	Gly	Leu	Gln	Lys	Gln
				85				90					95		
Asp	Leu	Cys	Gln	Glu	His	His	Glu	Pro	Leu	Lys	Leu	Phe	Cys	Gln	Lys
			100					105					110		
Asp	Gln	Ser	Pro	Ile	Cys	Val	Val	Cys	Arg	Glu	Ser	Arg	Glu	His	Arg
			115					120					125		
Leu	His	Arg	Val	Leu	Pro	Ala	Glu	Glu	Ala	Val	Gln	Gly	Tyr	Lys	Leu
							135				140				
Lys	Leu	Glu	Glu	Asp	Met	Glu	Tyr	Leu	Arg	Glu	Gln	Ile	Thr	Arg	Thr
145					150				155					160	
Gly	Asn	Leu	Gln	Ala	Arg	Glu	Glu	Gln	Ser	Leu	Ala	Glu	Trp	Gln	Gly
				165				170						175	
Lys	Val	Lys	Glu	Arg	Arg	Glu	Arg	Ile	Val	Leu	Glu	Phe	Glu	Lys	Met
			180					185					190		
Asn	Leu	Tyr	Leu	Val	Glu	Glu	Glu	Gln	Arg	Leu	Leu	Gln	Ala	Leu	Glu
			195					200					205		
Thr	Glu	Glu	Glu	Glu	Thr	Ala	Ser	Arg	Leu	Arg	Glu	Ser	Val	Ala	Cys
			210					215					220		
Leu	Asp	Arg	Gln	Gly	His	Ser	Leu	Glu	Leu	Leu	Leu	Gln	Leu	Glu	
225					230				235					240	
Glu	Arg	Ser	Thr	Gln	Gly	Pro	Leu	Gln	Met	Leu	Gln	Asp	Met	Lys	Glu
				245					250					255	
Pro	Leu	Ser	Arg	Lys	Asn	Asn	Val	Ser	Val	Gln	Cys	Pro	Glu	Val	Ala
				260					265					270	
Pro	Pro	Thr	Arg	Pro	Arg	Thr	Val	Cys	Arg	Val	Pro	Gly	Gln	Ile	Glu

<212> DNA

<213> Homo sapiens

<400> 5365

cagcctttcc cggcagcgag cgctcggcca ggtgcactag gcgctgtgcg ggccccctt
60
ccccgcgagt ccctcaagcg ggaacctgcc tcgtgtctcc caggagccat ggaggctgtg
120
gaactcgcca gaaaactgca ggaggaagct acgtgctcca tctgtctgga ttacttcaca
180
gacctgtga tgaccacctg tggccacaac ttctgccgag cctgcatcca gctgagctgg
240
gaaaaggcga ggggcaagaa ggggaggcgg aagcggaagg gctccttccc ctgccccgag
300
tgcagagaga tgtccccgca gaggaacctg ctgccaacc ggctgctgac caaggaggcc
360
gagatggcgc agcagcatcc tggctgtcag aagcaagacc tgtgccagga gcaccacgag
420
ccctcaagc ttttctgcca gaaggaccag agcccatct gtgtggtgtg caggagctcc
480
cgggagcacc ggctgcacag ggtgctgccc gccgaggagg cagtgcaggg gtacaagttg
540
aagctggagg aggacatgga gtaccttcgg gagcagatca ccaggacagg gaatctgcag
600
gccaggagg agcagagctt agccgagtgg cagggcaagg tgaaggagcg gagagaacgc
660
attgtgctgg agtttgagaa gatgaacctc tacctggtgg aagaagagca gaggtcctc
720
caggctctgg agacggaaga agaggagact gccagcaggc tccgggagag cgtggcctgc
780
ctggaccggc aggtgcactc tctggagctg ctgctgctgc agctggagga gcggagcaca
840
caggggcccc tccagatgct gcaggacatg aaggaacccc tgagcaggaa gaacaacgtg
900
agtgtgcagt gccagagggt tgcccccca accagacca ggactgtgtg cagagttccc
960
ggacagattg aagtgctaag aggttttcta gaggatgtgg tgcctgatgc cacctccgcg
1020
taccctacc tctcctgta tgagagccgc cagaggcgct acctcggtc ttcgccggag
1080
ggcagtgggt tctgcagcaa ggaccgattt gtggcttacc cctgtgctgt gggccagacg
1140
gccttctcct ctgggaggca ctactgggag gtgggcatga acatcaccgg ggacgcgttg
1200
tgggccctgg gtgtgtgcag ggacaacgtg agccgaaag acagggtcct caagtgcctc
1260
gaaaacggct tctgggtgggt gcagctgtcc aaggggacca agtacttatc caccttctct
1320
gccctaacc cggatcatgt gatggagcct ccagccaca tgggcatctt cctggacttc
1380
gaagccgggg aagtgtcctt ctacagtgtg agcgatgggt cccacctgca cacctactcc
1440
caggccacct tcccaggccc cctgcagcct ttcttctgcc tgggggctcc gaagtctggg
1500

agagctgtgg ccaggagagc agcagtgtccc tgagctgtccc taccgtctcg gtgccccctg
 360
 cagccccggc agccctggag gaggtggaga aagagggcgc tggggcggct acagggcncg
 420
 gggcctcagc ccgggctcta cagctacatc agggatgact tgtttacctc tgagatcttt
 480
 aaactggagc tgcagaacgc gcctcgccac gccagcttca gcgacgtccg gcgcttcttg
 540
 ggccgctttg gtctgcagcc ccacaaaacc aaactctttg ggcaaccacc ctgcgccttt
 600
 gtgacattcc gcagcgtgc agagagggac aaggccctgc gcgttttgca tgggtgccctc
 660
 tggaaagggc gccactcag tgtggcctgg cccggcccaa ggccgacccc atggccagga
 720
 ggaggcngac aggaggggtga gagtgcagcca ccagtaacac gangtggccg acgtgggtgac
 780
 ccctctatgg acagtgcctt antgctgagc agcttgagcg gaagcagctg gagtgcgagc
 840
 aggtgctgca gaaacnttgc ccaggaaatc gggagcacca accgtgcctt gcgt
 894

<210> 5364

<211> 187

<212> PRT

<213> Homo sapiens

<400> 5364

Ala	Ala	Leu	Pro	Ser	Arg	Cys	Pro	Leu	Gln	Pro	Arg	Gln	Pro	Trp	Arg
1				5					10					15	
Arg	Trp	Arg	Lys	Arg	Ala	Leu	Gly	Arg	Leu	Gln	Gly	Xaa	Gly	Pro	Gln
			20					25					30		
Pro	Gly	Leu	Tyr	Ser	Tyr	Ile	Arg	Asp	Asp	Leu	Phe	Thr	Ser	Glu	Ile
		35					40					45			
Phe	Lys	Leu	Glu	Leu	Gln	Asn	Ala	Pro	Arg	His	Ala	Ser	Phe	Ser	Asp
	50					55					60				
Val	Arg	Arg	Phe	Leu	Gly	Arg	Phe	Gly	Leu	Gln	Pro	His	Lys	Thr	Lys
65					70					75					80
Leu	Phe	Gly	Gln	Pro	Pro	Cys	Ala	Phe	Val	Thr	Phe	Arg	Ser	Ala	Ala
				85					90					95	
Glu	Arg	Asp	Lys	Ala	Leu	Arg	Val	Leu	His	Gly	Ala	Leu	Trp	Lys	Gly
			100					105					110		
Arg	Pro	Leu	Ser	Val	Ala	Trp	Pro	Gly	Pro	Arg	Pro	Thr	Pro	Trp	Pro
		115					120					125			
Gly	Gly	Gly	Xaa	Gln	Glu	Gly	Glu	Ser	Glu	Pro	Pro	Val	Thr	Arg	Xaa
	130					135						140			
Gly	Arg	Arg	Gly	Asp	Pro	Ser	Met	Asp	Ser	Ala	Leu	Xaa	Leu	Ser	Ser
145					150					155					160
Leu	Ser	Gly	Ser	Ser	Trp	Ser	Ala	Ser	Arg	Cys	Cys	Arg	Asn	Xaa	Ala
				165					170					175	
Gln	Glu	Ile	Gly	Ser	Thr	Asn	Arg	Ala	Leu	Arg					
			180						185						

<210> 5365

<211> 1824

tgctgggacc acaggcgtga gccaccgcgc ccggccgtct gtctggtttt caaaccaatc
 900
 aatgaacccg taagcctctt tggatatat aacaatgaaa aaattcatta agccatgaaa
 960
 tctagaaata agtcatatct ctgagttgat aaaatgcttt tctgaacata cattttaggt
 1020
 atctgggcgt gctggcgggt gcctgtaatc ccagctactc ggggaggctt gagacagggg
 1080

<210> 5362
 <211> 165
 <212> PRT
 <213> Homo sapiens

<400> 5362
 Cys Pro Thr Val Asp Pro Leu Leu Gln Lys Asn Cys Asn Asp Gly Ser
 1 5 10 15
 Ala Thr Ala Leu Ala Arg Val Pro Leu His Ala Cys Arg Glu Gly Arg
 20 25 30
 Trp Ala Ser Pro Ser Gly Phe Phe Cys Cys Cys Cys Phe Leu Arg
 35 40 45
 Trp Ser Leu Ala Leu Xaa Ala Gln Thr Glu Val Gln Arg Pro Asp Leu
 50 55 60
 Asn Ser Leu Gln Pro Pro Pro Gly Phe Lys Gly Phe Ser Cys Leu
 65 70 75 80
 Ser Leu Leu Ser Ser Trp Asp Tyr Arg His Pro Pro Ala Arg Pro Ala
 85 90 95
 Phe Phe Cys Ile Phe Ser Arg Asp Gly Val Leu Ser Cys Trp Pro Gly
 100 105 110
 Trp Ser Arg Thr Pro Asp Leu Met Xaa Ser Thr Arg Leu Gly Leu Pro
 115 120 125
 Asn Cys Trp Asp His Arg Arg Glu Pro Pro Arg Pro Ala Val Cys Leu
 130 135 140
 Val Phe Lys Pro Ile Asn Glu Pro Val Ser Leu Phe Gly Ile Tyr Asn
 145 150 155 160
 Asn Glu Lys Ile His
 165

<210> 5363
 <211> 894
 <212> DNA
 <213> Homo sapiens

<400> 5363
 cggccggcgc gggcccctgg cgggcgggcg gtacagcccc aagcctgaga cccggacctg
 60
 agcatcgagc gttcagatcc cgccccgcct ggggcgaagc cgggggtggc ggcgacctcg
 120
 cggcgttgca cgggctctgt gagcacctcc cctctgagca cttcccttgt gacaggccac
 180
 ttcccttggt acaggcccag gacgaggtgg ccaggcggcc cccatggcgt ccctgggtcta
 240
 ggccggagaac cgctgggagc atgagtgaga acctcgacaa cgaggggccc aagcccatgg
 300

1250	1255	1260
Arg Gln Ala Gln Ala Gln His Leu Gln Glu Val Arg Leu Val Pro Gln		
1265	1270	1275
Asp Arg Val Ala Glu Leu His Arg Leu Leu Ser Leu Gln Gly Glu Gln		1280
	1285	1290
Ala Arg Arg Arg Leu Asp Ala Gln Arg Glu Glu His Glu Lys Gln Leu		1295
	1300	1305
Lys Ala Thr Glu Glu Arg Val Glu Glu Ala Glu Met Ile Leu Lys Asn		1310
	1315	1320
Met Glu Met Leu Leu Gln Glu Lys Val Asp Lys Leu Lys Glu Gln Phe		1325
	1330	1335
Glu Lys Asn Thr Lys Ser Asp Leu Leu Leu Lys Glu Leu Tyr Val Glu		1340
1345	1350	1355
Asn Ala His Leu Val Arg Ala Leu Gln Ala Thr Glu Glu Lys Gln Arg		1360
	1365	1370
Gly Ala Glu Lys Gln Ser Arg Leu Leu Glu Glu Lys Val Arg Ala Leu		1375
	1380	1385
Asn Lys Leu Val Ser Arg Ile Ala Pro Ala Ala Leu Ser Val		1390
	1395	1400
		1405

<210> 5361
 <211> 1080
 <212> DNA
 <213> Homo sapiens

<400> 5361
 nngaattcct ctccaaagca gaggtagtca agttttccct ggtgtcagac agcatttcac
 60
 catgaaaccc taagacctgc ctctgggct ccttcagct ggtgggcctg gtgtgaagg
 120
 gggcttctg ggcctccggc agatggagga tggcattaaa tgccaacaca gtcagcttac
 180
 catccacaag gccagcagct gccaacagct gccctagacc tatcaacaag acaacttcat
 240
 ggctcccaat gggaatggag gctgggccc cctacttag agcaggggaa agaacttttc
 300
 cctcaaagag ccggggcagg atgccagaat ctaactacat cctctcccgg tttgcagttc
 360
 taggaagtgg aatttgctgc cctaggcgtg gtctaaagga caagtttaga aatgattcaa
 420
 ctcaagtcc taaacagagt aagtgccagt tgatgtccca ccgtggatcc tttactccag
 480
 aaaaattgta atgatggctc ggccaccgcc ttggctagag tccactgca cgcgtgtcgt
 540
 gagggccgat gggcaagtcc gtccggtttt tttgtgtgtt gttgtgtgtt tttgagatgg
 600
 agtctcgccc tgnntgccc gactgaagtg caaaggccc atctcaactc actgcaacct
 660
 ccgcctcctg ggttcaaagg attctcctgt ctcagcctcc tgagtagctg ggattacagg
 720
 caccgccag cagccccagc tttttttgt atttttagta gagacgggg tttatcatgt
 780
 tggccaggct ggtctcgaac gcctgacctc atgnnatcca ccgccttgg cctcccaaat
 840

820 825 830
 Leu Glu Leu Ala Arg Gly Lys Arg Val Asp Gly Pro Ser Leu Glu Ala
 835 840 845
 Glu Met Gln Ala Leu Pro Lys Asp Gly Leu Val Ala Gly Ser Gly Gln
 850 855 860
 Glu Gly Thr Arg Gly Leu Leu Pro Leu Arg Pro Gly Cys Gly Glu Arg
 865 870 875 880
 Pro Leu Ala Trp Leu Ala Pro Gly Asp Gly Arg Glu Ser Glu Glu Ala
 885 890 895
 Ala Gly Ala Gly Pro Arg Arg Arg Gln Ala Gln Asp Thr Glu Ala Thr
 900 905 910
 Gln Ser Pro Ala Pro Ala Pro Ala Pro Ala Ser His Gly Pro Ser Glu
 915 920 925
 Arg Trp Ser Arg Met Gln Pro Cys Gly Val Asp Gly Asp Ile Val Pro
 930 935 940
 Lys Glu Pro Glu Pro Phe Gly Ala Ser Ala Ala Gly Leu Glu Gln Pro
 945 950 955 960
 Gly Ala Arg Glu Leu Pro Leu Leu Gly Thr Glu Arg Asp Ala Ser Gln
 965 970 975
 Thr Gln Pro Arg Met Trp Glu Pro Pro Leu Arg Pro Ala Ala Ser Cys
 980 985 990
 Arg Gly Gln Ala Glu Arg Leu Gln Ala Ile Gln Glu Glu Arg Ala Arg
 995 1000 1005
 Ser Trp Ser Arg Gly Thr Gln Glu Gln Ala Ser Glu Gln Gln Ala Arg
 1010 1015 1020
 Ala Glu Gly Ala Leu Glu Pro Gly Cys His Lys His Ser Val Glu Val
 1025 1030 1035 1040
 Ala Arg Arg Gly Ser Leu Pro Ser His Leu Gln Leu Ala Asp Pro Gln
 1045 1050 1055
 Gly Ser Trp Gln Glu Gln Leu Ala Ala Pro Glu Glu Gly Glu Thr Lys
 1060 1065 1070
 Ile Ala Leu Glu Arg Glu Lys Asp Asp Met Glu Thr Lys Leu Leu His
 1075 1080 1085
 Leu Glu Asp Val Val Arg Ala Leu Glu Lys His Val Asp Leu Arg Glu
 1090 1095 1100
 Asn Asp Arg Leu Glu Phe His Arg Leu Ser Glu Glu Asn Thr Leu Leu
 1105 1110 1115 1120
 Lys Asn Asp Leu Gly Arg Val Arg Gln Glu Leu Glu Ala Ala Glu Ser
 1125 1130 1135
 Thr His Asp Ala Gln Arg Lys Glu Ile Glu Val Leu Lys Lys Asp Lys
 1140 1145 1150
 Glu Lys Ala Cys Ser Glu Met Glu Val Leu Asn Arg Gln Asn Gln Asn
 1155 1160 1165
 Tyr Lys Asp Gln Leu Ser Gln Leu Asn Val Arg Val Leu Gln Leu Gly
 1170 1175 1180
 Gln Glu Ala Ser Thr His Gln Ala Gln Asn Glu Glu His Arg Val Thr
 1185 1190 1195 1200
 Ile Gln Met Leu Thr Gln Ser Leu Glu Glu Val Val Arg Ser Gly Gln
 1205 1210 1215
 Gln Gln Ser Asp Gln Ile Gln Lys Leu Arg Val Glu Leu Glu Cys Leu
 1220 1225 1230
 Asn Gln Glu His Gln Ser Leu Gln Leu Pro Trp Ser Glu Leu Thr Gln
 1235 1240 1245
 Thr Leu Glu Glu Ser Gln Asp Gln Val Gln Gly Ala His Leu Arg Leu

```

385              390              395              400
Ala Ala Leu Ala Cys Tyr His Gln Glu Leu Ser Tyr Gln Gln Gly Gln
              405              410              415
Val Glu Gln Leu Ala Arg Glu Arg Asp Lys Ala Arg Gln Asp Leu Glu
              420              425              430
Arg Ala Glu Lys Arg Asn Leu Glu Phe Val Lys Glu Met Asp Asp Cys
              435              440              445
His Ser Thr Leu Glu Gln Leu Thr Glu Lys Lys Ile Lys His Leu Glu
              450              455              460
Gln Gly Tyr Arg Glu Arg Leu Ser Leu Leu Arg Ser Glu Val Glu Ala
465              470              475              480
Glu Arg Glu Leu Phe Trp Glu Gln Ala His Arg Gln Arg Ala Ala Leu
              485              490              495
Glu Trp Asp Val Gly Arg Leu Gln Ala Glu Glu Ala Gly Leu Arg Glu
              500              505              510
Lys Leu Thr Leu Ala Leu Lys Glu Asn Ser Arg Leu Gln Lys Glu Ile
              515              520              525
Val Glu Val Val Glu Lys Leu Ser Asp Ser Glu Arg Leu Ala Leu Lys
              530              535              540
Leu Gln Lys Asp Leu Glu Phe Val Leu Lys Asp Lys Leu Glu Pro Gln
545              550              555              560
Ser Ala Glu Leu Leu Ala Gln Glu Glu Arg Phe Ala Ala Val Leu Lys
              565              570              575
Glu Tyr Glu Leu Lys Cys Arg Asp Leu Gln Asp Arg Asn Asp Glu Leu
              580              585              590
Gln Ala Glu Leu Glu Gly Leu Trp Ala Arg Leu Pro Lys Asn Arg His
              595              600              605
Ser Pro Ser Trp Ser Pro Asp Gly Arg Arg Arg Gln Leu Pro Gly Leu
              610              615              620
Gly Pro Ala Gly Ile Ser Phe Leu Gly Asn Ser Ala Pro Val Ser Ile
625              630              635              640
Glu Thr Glu Leu Met Met Glu Gln Val Lys Glu His Tyr Gln Asp Leu
              645              650              655
Arg Thr Gln Leu Glu Thr Lys Val Asn Tyr Tyr Glu Arg Glu Ile Ala
              660              665              670
Ala Leu Lys Arg Asn Phe Glu Lys Glu Arg Lys Asp Met Glu Gln Ala
              675              680              685
Arg Arg Arg Glu Val Ser Val Leu Glu Gly Gln Lys Ala Asp Leu Glu
690              695              700
Glu Leu His Glu Lys Ser Gln Glu Val Ile Trp Gly Leu Gln Glu Gln
705              710              715              720
Leu Gln Asp Thr Ala Arg Gly Pro Glu Pro Glu Gln Met Gly Leu Ala
              725              730              735
Pro Cys Cys Thr Gln Ala Leu Cys Gly Leu Ala Leu Arg His His Ser
              740              745              750
His Leu Gln Gln Ile Arg Arg Glu Ala Glu Ala Glu Leu Ser Gly Glu
              755              760              765
Leu Ser Gly Leu Gly Ala Leu Pro Ala Arg Arg Asp Leu Thr Leu Glu
              770              775              780
Leu Glu Glu Pro Pro Gln Gly Pro Leu Pro Arg Gly Ser Gln Arg Ser
785              790              795              800
Glu Gln Leu Glu Leu Glu Arg Ala Leu Lys Leu Gln Pro Cys Ala Ser
              805              810              815
Glu Lys Arg Ala Gln Met Cys Val Ser Leu Ala Leu Glu Glu Glu Glu

```

<211> 1406

<212> PRT

<213> Homo sapiens

<400> 5360

Gly Thr Gly Val Val Pro Arg Ser Trp Pro Arg Ala Gly Gly Arg Arg
 1 5 10 15
 Arg Arg Leu Pro Ala Cys Tyr Gly Met Asp Glu Glu Glu Asn His Tyr
 20 25 30
 Val Ser Gln Leu Arg Glu Val Tyr Ser Ser Cys Asp Thr Thr Gly Thr
 35 40 45
 Gly Phe Leu Asp Arg Gln Glu Leu Thr Gln Leu Cys Leu Lys Leu His
 50 55 60
 Leu Glu Gln Gln Leu Pro Val Leu Leu Gln Thr Leu Leu Gly Asn Asp
 65 70 75 80
 His Phe Ala Arg Val Asn Phe Glu Glu Phe Lys Glu Gly Phe Val Ala
 85 90 95
 Val Leu Ser Ser Asn Ala Gly Val Arg Pro Ser Asp Glu Asp Ser Ser
 100 105 110
 Ser Leu Glu Ser Ala Ala Ser Ser Ala Ile Pro Pro Lys Tyr Val Asn
 115 120 125
 Gly Ser Lys Trp Tyr Gly Arg Arg Ser Arg Pro Glu Leu Cys Asp Ala
 130 135 140
 Ala Thr Glu Ala Arg Arg Val Pro Glu Gln Gln Thr Gln Ala Ser Leu
 145 150 155 160
 Lys Ser His Leu Trp Arg Ser Ala Ser Leu Glu Ser Val Glu Ser Pro
 165 170 175
 Lys Ser Asp Glu Glu Ala Glu Ser Thr Lys Glu Ala Gln Asn Glu Leu
 180 185 190
 Phe Glu Ala Gln Gly Gln Leu Gln Thr Trp Asp Ser Glu Asp Phe Gly
 195 200 205
 Ser Pro Gln Lys Ser Cys Ser Pro Ser Phe Asp Thr Pro Glu Ser Gln
 210 215 220
 Ile Arg Gly Val Trp Glu Glu Leu Gly Val Gly Ser Ser Gly His Leu
 225 230 235 240
 Ser Glu Gln Glu Leu Ala Val Val Cys Gln Ser Val Gly Leu Gln Gly
 245 250 255
 Leu Glu Lys Glu Glu Leu Glu Asp Leu Phe Asn Lys Leu Asp Gln Asp
 260 265 270
 Gly Asp Gly Lys Val Ser Leu Glu Glu Phe Gln Leu Gly Leu Phe Ser
 275 280 285
 His Glu Pro Ala Leu Leu Leu Glu Ser Ser Thr Arg Val Lys Pro Ser
 290 295 300
 Lys Ala Trp Ser His Tyr Gln Val Pro Glu Glu Ser Gly Cys His Thr
 305 310 315 320
 Thr Thr Thr Ser Ser Leu Val Ser Leu Cys Ser Ser Leu Arg Leu Phe
 325 330 335
 Ser Ser Ile Asp Asp Gly Ser Gly Phe Ala Phe Pro Asp Gln Val Leu
 340 345 350
 Ala Met Trp Thr Gln Glu Gly Ile Gln Asn Gly Arg Glu Ile Leu Gln
 355 360 365
 Ser Leu Asp Phe Ser Val Asp Glu Lys Val Asn Leu Leu Glu Leu Thr
 370 375 380
 Trp Ala Leu Asp Asn Glu Leu Met Thr Val Asp Ser Ala Val Gln Gln

gagatggagg tgctcaacag acagaatcag aactacaagg atcaattatc ccagctcaat
3540
gtcagggttc ttcaactggg acaggaggct tctaccacc aggcccaaaa cgaggagcat
3600
cgtgtgacca ttcagatgtt aacacagagc ctggaggagg tggttcgag tgggcagcag
3660
cagagtgacc aaatccaaaa acttagagtt gaacttgaat gcctgaatca ggaacatcag
3720
agcctgcagc tgccatggtc agagctgacc cagacccttg aggaaagtca agaccaggtg
3780
caggaggctc acctgaggct gaggcaggcc caggcccagc acttgacagga ggtccggctg
3840
gtgccccagg accgtgtggc cgagctgcat cgctgtctca gccttcaggg agagcaggcc
3900
aggaggcgcc tggatgcaca gcgggaagaa catgagaaac agctgaaagc cacagaagag
3960
cgggtggaag aggcggagat gattctgaag aatatggaaa tgctcctcca agagaaagtg
4020
gataagctga aggagcagtt tgaaaagaac acgaagtccg acctgctgct gaaggagctg
4080
tacgtggaga acgcccacct ggtgagagca cttcaggcca ccgaggagaa gcagcgaggc
4140
gccgagaaac aaagccgcct cttggaagaa aaagttcgcg ctctcaacaa actcgtcagt
4200
aggattgccc ccgcagccct ctctgtgtaa agacagatta ttttctagga ttcattcgaa
4260
agcacatctt ttaaattaag cactgtgct gccttagatt ccgtgggtca tgagccatga
4320
gtcctgggac atctgaggat tgggattctt tggtcacccc gcagatagtt aatgaatggt
4380
ctgccctggg caagatggag gtgggggctg ggggaatatg catgttgag aagccggcgt
4440
ttttattagc ggtcctgagt aatttccctt ggcaaaattc ccagttttgc cactctctgg
4500
agccagatcc tgggagctgt cagcaaggag caggtaagtg agcagttatg gacagcactt
4560
tccatgtggt gcttccgacc ctggctgtca gagtgaatg taaagtcagg gctctgtaca
4620
gttttgccat ttcactgttc tgctttaagc ttagcttatt agaactcttg gtggaggggtg
4680
cgtacacaca ttccagaaaa ggcttcactc gctgggaacg tcaaccagc gagaaaggag
4740
gggaagcccc ttctccgggg accttatctg tggactcagg aatgatgggtg tttattgcaa
4800
atgcacaatc tttttcccat tgaaatgtca tcacactgga aattgtacta tatgtaaaaa
4860
aaaaaaaaa gtatagtttt atatttgaaa tgtatgcaaa ttatggccat atggctgatt
4920
ggaatgtact actgtaatat aaaaagtcac tgtatttgca ataaattctt ttctattaaa
4980
attgaaaaaa aaaaaaaaaa aaa
5003

<210> 5360

agacggcagc tccctggact cggcccagca ggcatttcat tcctgggtaa ttctgctcca
1920
gtgagtatag aaacggagct gatgatggag caggtaaagg agcattacca agacctcagg
1980
acccagctgg agaccaaggt aaattactac gaaagggaaa ttgcggcact gaaaaggaac
2040
tttgagaagg agaggaagga catggagcag gctcgcaggc gcgaggtcag cgtgctggag
2100
ggtcagaagg ccgacctgga ggagctccac gagaagtctc aggaggtcat ctggggcctg
2160
caggagcagc tgcaggacac agcccgcggc cccgagcctg agcagatggg cctggcacc
2220
tgctgcacc aggcactgtg tggcctggcc ctgcggcatc acagccacct gcagcagatc
2280
aggagagagg ctgaggcgga gctgagtgga gagctgtcgg ggctgggagc cctgcccgt
2340
cgcagagacc tgaccttga gctggaggag ccgccgcagg gacccctgcc acgcgggagc
2400
cagaggtcgg agcagctgga gctggagagg gcactgaagc tgcagccctg tgcgagcgag
2460
aagcgcgcc agatgtgcgt atcgttggcc ctgcaggagg aggagtgtga gcttgcgcg
2520
gggaagcgag tggacgggccc ctccctggaa gcagagatgc aggccctgcc gaaagatggg
2580
ctggtggcag gaagtggcca ggagggcaca cgtggcctcc taccactgcg tccgggtgt
2640
ggggagcggc cactggcctg gctggcccca ggtgatggca gagagtctga ggaggcggca
2700
ggagccgggc ctgcgcgag gcaagcccag gacacagaag ctacgcagag cccggcccc
2760
gcccctgccc cgcatccca cggcccctca gagagggtgt cacgcatgca gccctgtgga
2820
gtggatggg atattgtccc aaaggagcca gagcctttcg gcgcgagcgc agcggggctg
2880
gagcagcctg gagcccggga gctgcctctg ctgggaacag agagagacgc ctcgaaacc
2940
cagccacgga tgtgggagcc acccctgagg ccggccgctt cgtgcagggg acaggctgag
3000
aggctacagg ccattcagga agagcgagca cgaagctgga gcaggggcac ccaggagcag
3060
gcctcggagc agcaggcccc ggccgagggc gccctggagc ctgggtgtca caagcacagt
3120
gtggaggttg ccaggagagg gtccttgcca tcccacctcc agctcgaga cccgcagggt
3180
tcctggcagg agcagcttgc tgcccagaa gagggggaga ccaaatagc gctggagaga
3240
gagaaggatg acatggaaac caaacttcta catctggaag acgtcgtccg ggctctggag
3300
aaacatgtag atttgagaga gaacgacaga ctggagttcc atagactttc tgaagaaaac
3360
actttgttga aaaacgatct gggaaggggt cggcaagagc ttgaagctgc agaaagtact
3420
cacgatgcac agaggaagga aattgaggtt ttaaagaaag acaaggaaaa ggctgctct
3480

ggaaacgacc atttcgccag ggttaacttt gaggaattta aggaaggttt tgtggctgtg
300
ttgtcttcaa atgtcgggtg tgcacctca gatgaagaca gtagttcttt ggaatcagct
360
gcctccagtg ccatccctcc aaagtatgtg aatggttcta agtggatgg ccgtcggagc
420
cggcctgagc tatgtgacgc tgccacagaa gccagacgcg tgccggagca gcaaaccag
480
gccagcctga aaagtcacct ctggcgctca gcgtctctgg agagcgtgga gagtcccaag
540
tcagatgaag aggccgagag cactaaagaa gctcagaatg aattatttga agcacaagga
600
cagctgcaga cctgggattc tgaggacttt gggagcccc agaagtcctg cagccctcc
660
tttgacaccc cagagagcca gatccggggc gtgtgggaag agctgggggt gggcagcagc
720
ggacacctga gcgagcagga gctggctgtg gtctgccaga gcgtcgggct ccaggggactc
780
gagaaagagg aactcgaaga cctgtttaac aaactggatc aagacggaga cggcaaagtg
840
agtcttgagg aattccagct tggcctcttc agtcatgagc ccgcgctact tctagagtct
900
tccactcggg ttaaaccgag caaggcttgg tctcattacc aggtcccaga ggagagcggc
960
tgccacacca ccacaacctc atccctcgtg tccctgtgct ccagcctgcg cctcttctcc
1020
agcattgacg atggttcttg cttecgctttt cctgatcagg tcctggccat gtggaccag
1080
gaggggattc agaatggcag ggagatcttg cagagcctgg acttcagcgt ggacgagaag
1140
gtgaaccttc tggagctgac ctggggccctt gacaacgagc tcatgacagt ggacagtgcc
1200
gtccagcagg cagccctggc ctgctaccac caggagctga gctaccagca agggcagggtg
1260
gagcagctgg caaggagcgc tgacaaggca aggcaggacc tggagagggc cgagaagagg
1320
aacctggagt ttgtgaaaga gatggacgac tgccactcca ccctggagca gctcacggag
1380
aagaaaatca agcatctgga gcaggggtac cgggaaaggc tgagcctcct gcggtctgag
1440
gtggaggcgg agcgagagct gttctgggag caggcccaca ggcagagggc cgcgctggag
1500
tgggacgtgg ggcgcctgca ggctgaggag gctggcctcc gcgagaagct gaccctggcc
1560
ctgaaggaaa acagtcgcct acagaaggag attgtggaag tgggtggaaa gctttcggat
1620
tcggagagggc tggccctgaa gctgcagaag gacctggagt ttgtgctgaa ggacaagctg
1680
gagccacaga gtgcagagct cctggcccag gaggagcggc tcgcagcagt cctgaaggaa
1740
tacgagctca agtgccggga cctgcaggac cgcaacgatg agctgcaagc tgagctggaa
1800
ggcctgtggg cgcggctgcc caagaaccgg cacagccct catggagccc ggatgggcgc
1860

```
<210> 5359
<211> 5003
<212> DNA
<213> Homo sapiens
```

```
<400> 5359
ncggccggcg gtacgggggt ggtgccgcgc tcctggcccc gcgcgggcgg acggcggagg
60
cgcctcccag cctgctatgg gatggatgaa gaagagaacc actatgtctc gcagctcagg
120
gaagtctaca gcagctgcga caccacgggg actggctttc tggaccgcca ggagctgacc
180
cagctctgcc ttaagcttca cctggagcag cagctgcccc tcctcctgca gacgcttctc
240
```


tttcctgagg gaggaagat gtctcagtac ctggatagcc tgaagggttg ggatgtggtg
 480
 gagtttcggg ggccaagcgg gttgctcact tacactggaa aagggcattt taacattcag
 540
 cccaacaaga aatctccacc agaaccccgga gtggcgaaga aactgggaat gattgccggc
 600
 gggacaggaa tcacccaat gctacagctg atccgggcca tcctgaaagt cctgaagat
 660
 ccaacccagt gctttctgct ttttgccaac cagacagaaa aggatatcat cttgctggag
 720
 gacttagagg aactgcaggc ccgctatccc aatcgcttta agctctggtt cactctggat
 780
 catcccccaa aagattgggc ctacagcaag ggctttgtga ctgccgacat gatccgggaa
 840
 cacctgcccg ctccagggga tgatgtgctg gtactgcttt gtgggccacc cccaatggtg
 900
 cagctggcct gccatcccaa cttggacaaa ctgggctact cacaaaagat gcgattcacc
 960
 tactgagcat cctccagctt ccctgggtgct gttcgctgca gttgttcccc atcagtactc
 1020
 aagcactata agccttagat tcctttcttc agagtttcag gttttttcag ttacatctag
 1080
 agctgaaatc tggatagtag ctgcaggaac aatattcctg tagccatgga agagggccaa
 1140
 ggctcagtca ctcttggat ggctctctaa atctccccgt ggcaacaggt ccaggagagg
 1200
 cccatggagc agtctcttcc atggagtaag aaggaaggga gcatgtacgc ttggtccaag
 1260
 attggctagt tccttgatag catcttactc tcaccttctt tgtgtctgtg atgaaaggaa
 1320
 cagtctgtgc aatgggtttt acttaaaactt cactgttcaa cctatgagca aatctgtatg
 1380
 tgtgagtata agttgagcat agcatacttc cagaggtggt cttatggaga tggcaagaaa
 1440
 ggaggaaatg atttcttcag atctcaaagg agtctgaaat atcatatttc tgtgtgtgtc
 1500
 tctctcagcc cctgcccagg ctagagggaa acagctactg ataatcgaaa actgctgttt
 1560
 gtggcaggaa cccctggctg tgcaaataaa tggggctgag gccctgtgt gatattgaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1680
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1722

<210> 5358

<211> 321

<212> PRT

<213> Homo sapiens

<400> 5358

Ser Gly Ile Cys Arg Leu Val Arg Trp Trp Arg Lys Arg Arg Ser Val
 1 5 10 15
 Met Gly Ile Gln Thr Ser Pro Val Leu Leu Ala Ser Leu Gly Val Gly

<400> 5356

```

Arg Lys Cys Ile Glu Asp Val Ile His Phe Ala Trp Glu Glu Lys Leu
 1           5           10           15
Phe Leu Leu Ala Asp Glu Val Tyr Gln Asp Asn Val Tyr Ser Pro Asp
 20           25           30
Cys Arg Phe His Ser Phe Lys Lys Val Leu Tyr Glu Met Gly Pro Glu
 35           40           45
Tyr Ser Ser Asn Val Glu Leu Ala Ser Phe His Ser Thr Ser Lys Gly
 50           55           60
Tyr Met Gly Glu Cys Gly Tyr Arg Gly Gly Tyr Met Glu Val Val Asn
 65           70           75           80
Leu His Pro Glu Ile Lys Gly Gln Leu Val Lys Leu Leu Ser Val Arg
 85           90           95
Leu Cys Pro Pro Val Ser Gly Gln Ala Ala Met Asp Ile Val Val Asn
 100          105          110
Pro Pro Val Ala Gly Glu Glu Ser Phe Glu Gln Phe Ser Arg Glu Lys
 115          120          125
Glu Ser Val Leu Gly Asn Leu Ala Lys Lys Ala Lys Leu Thr Glu Asp
 130          135          140
Leu Phe Asn Gln Val Pro Gly Ile His Cys Asn Pro Leu Gln Gly Ala
 145          150          155          160
Met Tyr Ala Phe Pro Arg Ile Phe Ile Pro Ala Lys Ala Val Glu Ala
 165          170          175
Ala Gln Ala His Gln Met Ala Pro Asp Met Phe Tyr Cys Met Lys Leu
 180          185          190
Leu Glu Glu Thr Gly Ile Cys Val Val Pro Gly Ser Gly Phe Gly Gln
 195          200          205
Arg Glu Gly Thr Tyr His Phe Arg Met Thr Ile Leu Pro Pro Val Glu
 210          215          220
Lys Leu Lys Thr Val Leu Gln Lys Val Lys Asp Phe His Ile Asn Phe
 225          230          235          240
Leu Glu Lys Tyr Ala
 245

```

<210> 5357

<211> 1722

<212> DNA

<213> Homo sapiens

<400> 5357

```

agtgggatct gtcggcttgt caggtggtgg aggaaaaggc gctccgtcat ggggatccag
60
acgagccccg tctgctggc ctccctgggg gtggggctgg tcaactctgct cggcctggct
120
gtgggctcct acttggttcg gaggtcccgc cggcctcagg tcaactctcct ggacccaat
180
gaaaagtacc tgctacgact gctagacaag acgactgtga gccacaacac caagaggttc
240
cgctttgccc tgcccaccgc ccaccacact ctggggctgc ctgtgggcaa acatatctac
300
ctctccaccc gaattgatgg cagcctgggc atcaggccat acactcctgt caccagtgt
360
gaggatcaag gctatgtgga tcttgtcatc aagggtctacc tgaaggggtgt gcaccccaaa
420

```

acctccaagg gctacatggg cgaatgcggc tacagaggag gctacatgga ggtgggtcaat
240
ttgcaccccg agatcaaggg ccagctgggtg aagctgctgt cggtagcgct gtgccccca
300
gtgtctgggc aggcccgcat ggacattgtt gtgaaccccc cggtaggcagg agaggagtcc
360
tttgagcaat tcagccgaga gaaggagtgc gtccctgggtg atctggccaa aaaagcaaag
420
ctgacggaag acctgtttta ccaagtccca ggaattcact gcaaccctt gcagggggcc
480
atgtacgcct tccctcgcat ctctattcct gccaaagctg tggaggctgc tcaggcccat
540
caaattggctc cagacatgtt ctactgcata aagctcctgg aggagactgg catctgtgtc
600
gtgcccggca gtggcttttg gcagagggaa ggcacttacc acttcaggat gactatcctc
660
cctccagtgg agaagctgaa aacgggtgctg cagaaggtga aagacttcca catcaacttc
720
ctggagaagt acgcgtgagg acgcctgagc cccagcggga gacctgtcct tggctcttcc
780
tccaatgcc cgtagcgtg aactgcctc ccccgtagct ctgcctcggg cctcgagag
840
gccgctggtc acttcgtcat cattttgccc ctggagacgt ctttctttgt gccttgatgt
900
tgagagcgcc tctcttttga gcaaacaagc attctatatg caaccagagt agaggggacc
960
tgctcagcag gtgtgaccag ggttctctga atctgttatt gtttttgctt ctggaaagtt
1020
catttggggt ttacaacaac taggatgtgt tgggtgagat gtttcagatc tggagaaatg
1080
agcagggtgc gggaaatgtg tgacttaacc gtggtgaggg ctggaaatcc aaactcacca
1140
ccatgatctg tgaaataaag cccttagcgg tgtgaagcat ccggtccttt gaacagaagg
1200
gcctggaagg cccctggggc tgagaaaggg tccgcccggg ggcctggagg caggcgccgg
1260
gagcgagta gcacgtggac tgggcaggat gttgcactag cttggggtag atgctggggg
1320
ctgcggccac ggtcagaggg cccactgtg aggcgtgggt gtgagccagg ctgcaggagg
1380
aactgggcct ccgcttccca gcaacgcagc caggcctgag aattctgtgc gcccggcggg
1440
ctttgggaat gaggggttcc cttgaacatg cgtaggctgg aacccgtct gagagggtctc
1500
cctgaatttc agtgacacat agtgcagccc ggcagtgtcc cacttccgtg gagagagccg
1560
ctggaatggt gtggacccat cccgcgggtg accggt
1596

<210> 5356

<211> 245

<212> PRT

<213> Homo sapiens

275 280 285
 Ile Pro Thr Tyr Pro Asp Val Asn Arg Leu Trp Ser Ile Val Asp Lys
 290 295 300
 Tyr Lys Val Thr Lys Phe Tyr Thr Ala Pro Thr Ala Ile Arg Leu Leu
 305 310 315 320
 Met Lys Phe Gly Asp Glu Pro Val Thr Lys His Ser Arg Ala Ser Leu
 325 330 335
 Gln Val Leu Gly Thr Val Gly Glu Pro Ile Asn Pro Glu Ala Trp Leu
 340 345 350
 Trp Tyr His Arg Val Val Gly Ala Gln Arg Cys Pro Ile Val Asp Thr
 355 360 365
 Phe Trp Gln Thr Glu Thr Gly Gly His Met Leu Thr Pro Leu Pro Val
 370 375 380
 Pro Thr Pro Met Lys Pro Gly Ser Ala Thr Phe Pro Phe Phe Gly Val
 385 390 395 400
 Ala Pro Ala Ile Leu Asn Glu Ser Gly Glu Glu Leu Glu Gly Glu Ala
 405 410 415
 Glu Gly Tyr Leu Val Phe Lys Gln Pro Trp Pro Gly Ile Met Arg Thr
 420 425 430
 Val Tyr Gly Asn His Glu Arg Phe Glu Thr Thr Tyr Ser Lys Lys Phe
 435 440 445
 Pro Gly Tyr Tyr Val Thr Gly Asp Gly Cys Gln Arg Asp Gln Asp Gly
 450 455 460
 Tyr Tyr Trp Ile Thr Gly Arg Ile Asp Asp Met Leu Asn Val Ser Gly
 465 470 475 480
 His Leu Leu Ser Thr Ala Glu Val Glu Ser Ala Leu Val Glu His Glu
 485 490 495
 Ala Val Ala Glu Ala Ala Val Val Gly His Pro His Pro Val Lys Gly
 500 505 510
 Glu Cys Leu Tyr Cys Phe Val Thr Leu Cys Asp Gly His Thr Phe Ser
 515 520 525
 Pro Lys Leu Thr Glu Glu Leu Lys Lys Gln Ile Arg Glu Lys Ile Gly
 530 535 540
 Pro Ile Ala Thr Pro Asp Tyr Ile Gln Asn Ala Pro Gly Leu Pro Lys
 545 550 555 560
 Thr Arg Ser Gly Lys Ile Met Arg Arg Val Leu Arg Lys Ile Ala Gln
 565 570 575
 Asn Asp His Asp Leu Gly Asp Met Ser Thr Val Ala Asp Pro Ser Val
 580 585 590
 Ile Ser His Leu Phe Ser His Arg Cys Leu Thr Ile Gln
 595 600 605

<210> 5355

<211> 1596

<212> DNA

<213> Homo sapiens

<400> 5355

agaaagtgc tagaatgt gatccacttt gctgggaag agaagctctt tctcctggct
 60
 gatgaggtgt accaggacaa cgtgtactct ccagattgca gattccactc cttcaagaag
 120
 gtgctgtacg agatggggcc cgagtactcg agtaatgtgg agcttgctc cttccactcc
 180

ttctgttctg ggtctgaatt cccttttgtg ccagatgccca gtactgtctg cccattggct
 3960
 ccaggggctg tatgggcaga ttcagtctcc agagggtatt cagatcatct gcttctttga
 4020
 aggagtaaat gtgttttgtt cctagggcca gaggagcttg tcttccttgt cctctgttcc
 4080
 caccctcccc tgaacagaac ccagcccata agagacattc tcagatgaaa ctctgttttc
 4140
 ttgccccagt caggctcaag ccctgtgggt gtaggaataa agcctgtgat ctcaaaaaaa
 4200
 aaaaaaaaaa aaaaaaa
 4217

<210> 5354
 <211> 605
 <212> PRT
 <213> Homo sapiens

<400> 5354
 Met Lys Gly Ala Thr Thr Asn Ile Cys Tyr Asn Val Leu Asp Arg Asn
 1 5 10 15
 Val His Glu Lys Lys Leu Gly Asp Lys Val Ala Phe Tyr Trp Glu Gly
 20 25 30
 Asn Glu Pro Gly Glu Thr Thr Gln Ile Thr Tyr His Gln Leu Leu Val
 35 40 45
 Gln Val Cys Gln Phe Ser Asn Val Leu Arg Lys Gln Gly Ile Gln Lys
 50 55 60
 Gly Asp Arg Val Ala Ile Tyr Met Pro Met Ile Pro Glu Leu Val Val
 65 70 75 80
 Ala Met Leu Ala Cys Ala Arg Ile Gly Ala Leu His Ser Ile Val Phe
 85 90 95
 Ala Gly Phe Ser Ser Glu Ser Leu Cys Glu Arg Ile Leu Asp Ser Ser
 100 105 110
 Cys Ser Leu Leu Ile Thr Thr Asp Ala Phe Tyr Arg Gly Glu Lys Leu
 115 120 125
 Val Asn Leu Lys Glu Leu Ala Asp Glu Ala Leu Gln Lys Cys Gln Glu
 130 135 140
 Lys Gly Phe Pro Val Arg Cys Cys Ile Val Val Lys His Leu Gly Arg
 145 150 155 160
 Ala Glu Leu Gly Met Gly Thr Pro Pro Ala Ser Pro Pro Gln Leu Arg
 165 170 175
 Gly His Ala Asp Val Gln Ile Ser Trp Asn Gln Gly Ile Asp Leu Trp
 180 185 190
 Trp His Glu Leu Met Gln Glu Ala Gly Asp Glu Cys Glu Pro Glu Trp
 195 200 205
 Cys Asp Ala Glu Asp Pro Leu Phe Ile Leu Tyr Thr Ser Gly Ser Thr
 210 215 220
 Gly Lys Pro Lys Gly Val Val His Thr Val Gly Gly Tyr Met Leu Tyr
 225 230 235 240
 Val Ala Thr Thr Phe Lys Tyr Val Phe Asp Phe His Ala Glu Asp Val
 245 250 255
 Phe Trp Cys Thr Ala Asp Ile Gly Trp Ile Thr Gly His Ser Tyr Val
 260 265 270
 Thr Tyr Gly Pro Leu Ala Asn Gly Ala Thr Ser Val Leu Phe Glu Gly

atcctgtaca ccagtggctc cacaggcaaa cccaaggggtg tggttcacac agttgggggc
2340
tacatgctct atgtagccac aaccttcaag tatgtgtttg acttccatgc agaggatgtg
2400
ttctgggtgca cggcagacat tggttggatc actggtcatt cctacgtcac ctatggggcca
2460
ctggccaatg gtgccaccag tgttttgttt gaggggattc ccacatatcc ggacgtgaac
2520
cgctgtgga gcattgtgga caaatacaag gtgaccaagt tctacacagc acccacagcc
2580
atccgtctgc tcatgaagtt tggagatgag cctgtcacca agcatagccg ggcatccttg
2640
caggtgttag gcacagtggg tgaaccatc aaccctgagg cctggctatg gtaccaccg
2700
gtggtaggtg ccagcgtg ccccatcgtg gacaccttct ggcaaacaga gacaggtggc
2760
cacatgttga cccccctcc tgttcccaca cccatgaaac ccggttctgc tactttccca
2820
ttctttggtg tagctcctgc aatcctgaat gagtccgggg aagagttgga aggtgaagct
2880
gaaggttatc tgggtgtcaa gcagccctgg ccagggatca tgcgcacagt ctatgggaac
2940
cacgaacgct ttgagacaac ctactctaag aagtttctg gatactatgt tacaggagat
3000
ggctgccagc gggaccagga tggctattac tggatcactg gcaggattga tgacatgctc
3060
aatgtatctg gacacctgct gagtacagca gaggtggagt cagcacttgt ggaacatgag
3120
gctgttgca aggcagctgt ggtggggccac cctcatcctg tgaaggtgga atgcctctac
3180
tgctttgtca ccttgtgtga tggccacacc ttcagcccca agctcaccca ggagctcaag
3240
aagcagatta gagaaaagat tggccccatt gccacaccag actacatcca gaatgcacct
3300
ggcttgccca aaacccgctc agggaaaatc atgaggcgag tgcttcggaa gattgctcag
3360
aatgaccatg acctcgggga catgtctact gtggctgacc catctgtcat cagtcacctc
3420
ttcagccacc gctgcctgac catccagtga acatgatcct gacctttacc taggattcct
3480
cctgctccaa actttgccca tcctctttgc cccctcagga gtgctgaggg ccagtgttga
3540
cccacactac cctcccttga ccagctgtct gggaccggaa accagctttg tctccaggta
3600
gagacaacat cctgtgactg ccaggcagaa aggacagggc ccaggtcagc ctcagtctgc
3660
tgtgcctcca gactgcagag ctctcagaac ccagaacaga gacgaaaagg ctacctctcc
3720
tacccaagtt aagtgttcaa aggggatgtg agggcctcca ctgaagcagg gaggcagctg
3780
tgtaatccta tgtcagctct cttaggaagc cccagtactt atattgggca tgcacttgcc
3840
cttaaaaaca atgatttgtg agtccaggaa caatttacta tttttaaata attttgctgc
3900

atgatagcta cagcattaat tgaacatgcc taaacaaaaa agatgttaat tactagttac
720
aggatatacat gccaaaatta cccccagga tgggcatagt caatcatttt cctacagtgg
780
tgaaataaaa caagctttga tcatgcttca gcaagtagaa ttatgtggta gagaagtcag
840
gccccatatg ctaaaatttg cacttcttgc cataaacttt tcatgtatat aagtcaaaac
900
ccagtctcct aggaccacta aacctatgat gggctttcaa ctgtaacact cattcacatc
960
tttaagttag gcccatgggc atggaacctg gccaaaggtt caagcacgcc taagctgaag
1020
aaaaactaaa gtcaccccca tataattagg tccagtctag gcacaggaag ccacagctgg
1080
ttgactgac agggcttctc aggactggat gttggttgaa ttgaggattc cagaagtagc
1140
atcagatttg gaagcctttg aaagtctctg ctgttgaaaa ataaataaca tcagtggcca
1200
tactgcctct cttacacatg gccaccctt ctaagtttg ttaagtgtca gcaaaaggtc
1260
ccttgaagg agtttctctg agatccctag cctgcaatag gctgcgttag gagtaaaagg
1320
tgaggaactc tgagcaccat tctattagtc acagacagag tgcattgtgca cgcattgccc
1380
tgaccccgcc ggggccagga ggaagctgga gccggaggcc gggcgaggag ttggtctccg
1440
ccgcccagg tcagccgctc cgcgcacgtc ccctcgctgc agcgctaccg cgagctgcac
1500
cgccgctccg tggaggagcc gcgggaattc tggggagaca ttgccaagga attttactgg
1560
aagactccat gccctggccc attccttcgg tacaactttg atgtgactaa agggaaaate
1620
ttcattgagt ggatgaaagg agcaactacc aacatctgct acaatgtact ggatcgaaat
1680
gtccatgaga aaaagcttgg agataaagtt gctttttact gggagggcaa tgagccaggg
1740
gagaccactc agatcacata ccatcagctt ctgggtccaag tgtgtcagtt cagcaatgtt
1800
ctccgaaaac agggcattca gaagggggac cgagtggcca tctacatgcc tatgatccca
1860
gagcttgtgg tggccatgct ggcattgtgc cgattgggg ctttgcactc cattgtgttt
1920
gcaggttctt cttcagagtc tctatgtgaa cggatcttgg attccagctg cagtcttctc
1980
atcactacag atgccttcta caggggggaa aagcttgtga acctgaagga gctggctgac
2040
gaggccctgc agaagtgtca ggagaagggg tccccagtaa gatgctgcat tgtggtcaag
2100
cacctggggc gggcagagct cggcatgggt actccaccag ccagtcccc ccaattaaga
2160
ggatcatgcc atgtgcagat ctcatggaac caagggattg acttgtggtg gcatgagctc
2220
atgcaagagg caggggatga gtgtgagccc gagggtgtg atgccgagga cccactcttc
2280

cctcctctca ctattggaca gcttgaagcc aaggcccagg cctgaccagt aggaatccga
 300
 caggatgttg gcgtagacag cggtcatttt atccatgcaa ttg
 343

<210> 5352
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 5352
 Met Asp Lys Met Thr Ala Val Tyr Ala Asn Ile Leu Ser Asp Ser Tyr
 1 5 10 15
 Trp Ser Gly Leu Gly Leu Gly Phe Lys Leu Ser Asn Ser Glu Arg Arg
 20 25 30
 Asn Cys Asp Thr Arg Asn Gly Ser Asn Lys Ser Asp Phe Asp Trp His
 35 40 45
 Gln Asp Ala Leu Ser Lys Ser Leu Gln Gln Asn Leu Pro Ser Arg Ser
 50 55 60
 Val Ser Lys Pro Ser Leu Phe Ser Ser Val Gln Leu Tyr Arg Gln Ser
 65 70 75 80
 Ser Lys Met Cys Gly Thr Val Phe Thr Gly Ala Ser Arg Phe Arg Cys
 85 90 95
 Arg Gln Cys Ser Ala Ala Tyr Asp Thr Leu Val Glu Leu Thr Val His
 100 105 110

<210> 5353
 <211> 4217<212> DNA
 <213> Homo sapiens

<400> 5353
 tttttttttt ttgaaatgta agtatacaga ttttaattta tttttaagaa taattgtata
 60
 ttttaaaaac aggacacgta ctgtatgagt aaacagcgtg gctaacacca agtccacact
 120
 ggtaagcttt tgagaacctat ttacactatg ttgacagtag tactgctgca ggcagacagc
 180
 ggaagaataa ataatagtgc ttcaagaaga gtagtgattg agaggatagg taaagagggc
 240
 gcctcatcgt ggaagctaga gcaggaacac ctccccagta gtgacatgtg caaagttcca
 300
 aatctccacg acaaagacag ctcaaccac tggaacaaac agactcccaa tgtggctggc
 360
 aactgcgggg gtagaagaac tcaggcaaag taggcacagg aatggggggag atgagagcca
 420
 agggacaaac gccgagaaaag cgttccgaca agcatgtgtg ttcatacatg cataccccca
 480
 acaaagggca atgcactgtg taacagaact gaacacaatt taacaaagct gctcccagcc
 540
 ttcctgtcac ctctttggca gtagggcagg ccattctcaac ttcggacaca caaagacatt
 600
 ctcttcagga ggaaggctgt cctgtgtggt ggggacaagg cttcaggtaa gagcaaagct
 660

acagttctca ggtcactgca tgtcactcct caccactgcc ctgtggttgc caggacaact
 120
 tgggcaaaca ccacaccagc agggagcccc aagcccagcc caagccccac aaagtctcca
 180
 gccaggaagg ggaaggcagg ataccactgc ctgggaaggc ggaagtgaga gaggcaggcc
 240
 aaccattcc tgtttctctt ctacttcttt ctccaaagaa agccctcact ctctcgcta
 300
 cagcccaggg aggtcacgag gggctgggaa gactcctgtg gcaaagtggc ccactccagc
 360
 ccaggcctga gaaaaaagg accccgaaat ccttctggct accagtatct tctgccttca
 420
 cgcgt
 425

<210> 5350

<211> 134

<212> PRT

<213> Homo sapiens

<400> 5350

Met	Gly	Gly	Leu	Gly	Leu	His	Phe	Phe	Val	Pro	Thr	His	Ser	Ser	Gln
1				5					10					15	
Val	Thr	Ala	Cys	His	Ser	Ser	Pro	Leu	Pro	Cys	Gly	Cys	Gln	Asp	Asn
			20					25					30		
Leu	Gly	Lys	His	His	Thr	Ser	Arg	Glu	Pro	Gln	Ala	Gln	Pro	Lys	Pro
		35					40					45			
His	Lys	Val	Ser	Ser	Gln	Glu	Gly	Glu	Gly	Arg	Ile	Pro	Leu	Pro	Gly
	50					55				60					
Lys	Ala	Glu	Val	Arg	Glu	Ala	Gly	Gln	Pro	Ile	Pro	Val	Ser	Leu	Leu
65					70					75				80	
Leu	Leu	Ser	Pro	Lys	Lys	Ala	Leu	Thr	Leu	Leu	Ala	Thr	Ala	Gln	Gly
				85					90					95	
Gly	His	Glu	Gly	Leu	Gly	Arg	Leu	Leu	Trp	Gln	Ser	Gly	Pro	Leu	Gln
			100					105					110		
Pro	Arg	Pro	Glu	Lys	Lys	Arg	Thr	Pro	Lys	Ser	Phe	Trp	Leu	Pro	Val
		115					120					125			
Ser	Ser	Ala	Phe	Thr	Arg										
															130

<210> 5351

<211> 343

<212> DNA

<213> Homo sapiens

<400> 5351

gtgcacagtc agctcgacta ggggtgtcata ggccgcgctg cactgtcggc atcggaatct
 60
 gctggcccct gtgaacacag tcccgcacat cttgctgctc tgtcgggtaca actgcaccga
 120
 gctgaacagg ctgggtttcg agacggaccg agaaggcaag ttctgctgca ggcttttggg
 180
 cagagcgtct tggtgccaat caaaatcact cttgttgctg ccgtttcggg tgtcacagtt
 240

```

      340      345      350
Glu Gln Thr Leu Pro Gly Thr Asn Leu Thr Gly Phe Leu Ser Pro Val
      355      360      365
Asp Asn His Met Arg Asn Leu Thr Ser Gln Asp Leu Leu Tyr Asp Leu
      370      375      380
Asp Ile Asn Ile Phe Asp Glu Ile Asn Leu Met Ser Leu Ala Thr Glu
385      390      395      400
Asp Asn Phe Asp Pro Ile Asp Val Ser Gln Leu Phe Asp Glu Ser Asp
      405      410      415
Ser Asp Ser Gly Leu Ser Leu Asp Ser Ser His Asn Asn Thr Ser Val
      420      425      430
Ile Lys Ser Asn Ser Ser His Ser Val Cys Asp Glu Gly Ala Ile Gly
      435      440      445
Tyr Cys Thr Asp His Glu Ser Ser Ser His His Asp Leu Glu Gly Ala
      450      455      460
Val Gly Gly Tyr Tyr Pro Glu Pro Ser Lys Leu Cys His Leu Asp Gln
465      470      475      480
Ser Asp Ser Asp Phe His Gly Asp Leu Thr Phe Gln His Val Phe His
      485      490      495
Asn His Thr Tyr His Leu Gln Pro Thr Ala Pro Glu Ser Thr Ser Glu
      500      505      510
Pro Phe Pro Trp Pro Gly Lys Ser Gln Lys Ile Arg Ser Arg Tyr Leu
      515      520      525
Glu Asp Thr Asp Arg Asn Leu Ser Arg Asp Glu Gln Arg Ala Lys Ala
      530      535      540
Leu His Ile Pro Phe Ser Val Asp Glu Ile Val Gly Met Pro Val Asp
545      550      555      560
Ser Phe Asn Ser Met Leu Ser Arg Tyr Tyr Leu Thr Asp Leu Gln Val
      565      570      575
Asp Ile Arg Arg Arg Gly Lys Asn Lys Val Ala Ala
      580      585      590
Gln Asn Cys Arg Lys Arg Lys Leu Asp Ile Ile Leu Asn Leu Glu Asp
      595      600      605
Asp Val Cys Asn Leu Gln Ala Lys Lys Glu Thr Leu Lys Arg Glu Gln
      610      615      620
Ala Gln Cys Asn Lys Ala Ile Asn Ile Met Lys Gln Lys Leu His Asp
625      630      635      640
Leu Tyr His Asp Ile Phe Ser Arg Leu Arg Asp Asp Gln Gly Arg Pro
      645      650      655
Val Asn Pro Asn His Tyr Ala Leu Gln Cys Thr His Asp Gly Ser Ile
      660      665      670
Leu Ile Val Pro Lys Glu Leu Val Ala Ser Gly His Lys Lys Glu Thr
      675      680      685
Gln Lys Gly Lys Arg Lys
      690

```

<210> 5349

<211> 425

<212> DNA

<213> Homo sapiens

<400> 5349

gtgcacgaag ttccaatggg cttatgggag ggctaggtct ccacttcttt gtacctacac
60

acactattttt aatctttata tttaacttat aaattttgct ttctatggaa ataaattttg
 2880
 tattttgtatt aaa
 2893

<210> 5348
 <211> 694
 <212> PRT
 <213> Homo sapiens

<400> 5348
 Met Lys His Leu Lys Arg Trp Trp Ser Ala Gly Gly Gly Leu Leu His
 1 5 10 15
 Leu Thr Leu Leu Ser Leu Ala Gly Leu Arg Val Asp Leu Asp Leu
 20 25 30
 Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe
 35 40 45
 Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala
 50 55 60
 Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu
 65 70 75 80
 Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg
 85 90 95
 Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu
 100 105 110
 Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu
 115 120 125
 Gly Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp
 130 135 140
 Gly Gly Ser Gln Ala Val Gln Gly Gly Cys Gly Asp Ser Arg Ala Ala
 145 150 155 160
 Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Glu Lys Ala Pro Ala Glu
 165 170 175
 Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn
 180 185 190
 Gly Val Leu Arg Glu Lys His Glu Ala Val Asp His Ser Ser Gln His
 195 200 205
 Glu Glu Asn Glu Glu Arg Val Ser Ala Gln Lys Glu Asn Ser Leu Gln
 210 215 220
 Gln Asn Asp Asp Asp Glu Asn Lys Ile Ala Glu Lys Pro Asp Trp Glu
 225 230 235 240
 Ala Glu Lys Thr Thr Glu Ser Arg Asn Glu Arg His Leu Asn Gly Thr
 245 250 255
 Asp Thr Ser Phe Ser Leu Glu Asp Leu Phe Gln Leu Leu Ser Ser Gln
 260 265 270
 Pro Glu Asn Ser Leu Glu Gly Ile Ser Leu Gly Asp Ile Pro Leu Pro
 275 280 285
 Gly Ser Ile Ser Asp Gly Met Asn Ser Ser Ala His Tyr His Val Asn
 290 295 300
 Phe Ser Gln Ala Ile Ser Gln Asp Val Asn Leu His Glu Ala Ile Leu
 305 310 315 320
 Leu Cys Pro Asn Asn Thr Phe Arg Arg Asp Pro Thr Ala Arg Thr Ser
 325 330 335
 Gln Ser Gln Glu Pro Phe Leu Gln Leu Asn Ser His Thr Thr Asn Pro

tatcatgtaa acttcagcca ggctataagt caggatgtga atcttcatga ggccatcttg
1260
ctttgtccca acaatacatt tagaagagat ccaacagcaa ggacttcaca gtcacaagaa
1320
ccatttctgc agttaaattc tcataccacc aatcctgagc aaacccttcc tggaactaat
1380
ttgacaggat ttctttcacc gggtgacaat catatgagga atctaacaag ccaagaccta
1440
ctgtatgacc ttgacataaa tatatttgat gagataaact taatgtcatt ggccacagaa
1500
gacaactttg atccaatcga tgtttctcag ctttttgatg aatcagattc tgattctggc
1560
ctttcttttag attcaagtca caataatacc tctgtcatca agtctaattc ctctactct
1620
gtgtgtgatg aagggtgctat aggttattgc actgaccatg aatctagttc ccatcatgac
1680
ttagaagggtg ctgtagggtg ctactaccca gaaccagta agctttgtca cttggatcaa
1740
agtgattctg atttccatgg agatcttaca tttcaacacg tatttcataa ccacacttac
1800
cacttacagc caactgcacc agaattctact tctgaacctt ttccgtggcc tgggaagtca
1860
cagaagataa ggagtagata ccttgaagac acagatagaa acttgagccg tgatgaacag
1920
cgtgctaaag ctttgcatat ccctttttct gtagatgaaa ttgtcggtat gcctgttgat
1980
tctttcaata gcatgttaag tagatattat ctgacagacc tacaagtctc acttatccgt
2040
gacatcagac gaagaggga aaataaagtt gctgcgaga actgtcgtaa acgcaaattg
2100
gacataattt tgaatttaga agatgatgta tgtaacttgc aagcaaagaa ggaaactctt
2160
aagagagagc aagcacaatg taacaaagct attaacataa tgaaacagaa actgcatgac
2220
ctttatcatg atatttttag tagattaaga gatgaccaag gtaggccagt caatcccaac
2280
cactatgctc tccagtgtac ccatgatgga agtatcttga tagtaccxaa agaactgggt
2340
gcctcaggcc acaaaaagga aacccaaaag ggaaagagaa agtgagaaga aactgaagat
2400
ggactctatt atgtgaagta gtaatgttca gaaactgatt atttgatca gaaaccattg
2460
aaactgcttc aagaattgta tctttaagta ctgctacttg aataactcag ttaacgtgt
2520
tttgaagctt acatggacaa atgttttagga cttcaagatc acacttggtg gcaatctggg
2580
ggagccacaa cttttcatga agtgcatgtg atacaaaatt catagttagt tccaaagaat
2640
aggttaacat gaaaaccag taagactttc catcttgga gccatcctt ttaagagtaa
2700
gttggttact tcaaaaagag caaacactgg ggatcaaatt attttaagag gtatttcagt
2760
tttaaatgca aaatagcctt attttcattt agtttgtag cactatagtg agcttttcaa
2820

50	55	60
Val Tyr Asp Val Met Leu Asn Gln Thr Asn Leu Gln Phe Asn Asn Asn		
65	70	75
Lys Tyr Tyr Leu Ile Gln Leu Leu Glu Asp Asp Ala Gln Arg Asn Phe		80
	85	90
Ser Val Trp Met Arg Trp Gly Arg Val Gly Lys Met Gly Gln His Ser		95
	100	105
Leu Val Ala Cys Ser Gly Asn Leu Asn Lys Ala Lys Glu Ile Phe Gln		110
	115	120
Lys Lys Phe Leu Asp Lys Thr Lys Asn Asn Trp Glu Asp Arg Glu Lys		125
	130	135
Phe Glu Lys Val Pro Gly Lys Tyr Asp Met Leu Gln Met Asp Tyr Ala		140
145	150	155
Thr Asn Thr Gln Asp Glu Glu Glu Thr Lys Lys Glu Glu Ser Leu Lys		160
	165	170
Ser Pro Leu Lys Pro Glu Ser Gln Leu Asp Leu Arg Val Gln Glu Leu		175
	180	185
Ile Lys Leu Ile Cys Asn Val Gln Ala Met Glu Glu Met Met Met Glu		190
	195	200
Met Lys Tyr Asn Thr Lys Lys Ala Pro Leu Gly Lys Leu Thr Val Ala		205
	210	215
Gln Ile Lys Ala Gly Tyr Gln Ser Leu Lys Lys Ile Glu Asp Cys Ile		220
225	230	235
Arg Ala Gly Gln His Gly Arg Ala Leu Met Glu Ala Cys Asn Glu Phe		240
	245	250
Tyr Thr Arg Ile Pro His Asp Phe Gly Leu Arg Thr Pro Pro Leu Ile		255
	260	265
Arg Thr Gln Lys Glu Leu Ser Glu Lys Ile Gln Leu Leu Glu Ala Leu		270
	275	280
Gly Asp Ile Glu Ile Ala Ile Lys Leu Val Lys Thr Glu Leu Gln Ser		285
	290	295
Pro Glu His Pro Leu Asp Gln His Tyr Arg Asn Leu His Cys Ala Leu		300
305	310	315
Arg Pro Leu Asp His Glu Ser Tyr Glu Phe Lys Val Ile Ser Gln Tyr		320
	325	330
Leu Gln Ser Thr His Ala Pro Thr His Ser Asp Tyr Thr Met Thr Leu		335
	340	345
Leu Asp Leu Phe Glu Val Glu Lys Asp Gly Glu Lys Glu Ala Phe Arg		350
	355	360
Glu Asp Leu His Asn Arg Met Leu Leu Trp His Gly Ser Arg Met Ser		365
	370	375
Asn Trp Val Gly Ile Leu Ser His Gly Leu Arg Ile Ala Pro Pro Glu		380
385	390	395
Ala Pro Ile Thr Gly Tyr Met Phe Gly Lys Gly Ile Tyr Phe Ala Asp		400
	405	410
Met Ser Ser Lys Ser Ala Asn Tyr Cys Phe Ala Ser Arg Leu Lys Asn		415
	420	425
Thr Gly Leu Leu Leu Leu Ser Glu Val Ala Leu Gly Gln Cys Asn Glu		430
	435	440
Leu Leu Glu Ala Asn Pro Lys Ala Glu Gly Leu Leu Gln Gly Lys His		445
	450	455
Ser Thr Lys Gly Leu Gly Lys Met Ala Pro Ser Ser Ala His Phe Val		460
465	470	475
Thr Leu Asn Gly Ser Thr Val Pro Leu Gly Pro Ala Ser Asp Thr Gly		480

tcacagctag atcttcgggt acaggagtta ataaagttga tctgtaatgt tcaggccatg
 780
 gaagaaatga tgatggaaat gaagtataat accaagaaag cccacttgg gaagctgaca
 840
 gtggcacaaa tcaaggcagg ttaccagtct cttaagaaga ttgaggattg tattcgggct
 900
 ggccagcatg gacgagctct catggaagca tgcaatgaat tctacaccag gattccgcat
 960
 gactttggac tccgtactcc tccactaatc cggacacaga aggaactgtc agaaaaata
 1020
 caattactag aggctttggg agacattgaa attgctatta agctggtgaa aacagagcta
 1080
 caaagcccag aacaccatt ggaccaacac tatagaaacc tacattgtgc cttgcgcccc
 1140
 cttgaccatg aaagttacga gttcaaagt atttcccagt acctacaatc taccatgct
 1200
 cccacacaca gcgactatac catgaccttg ctggatttgt ttgaagtgga gaaggatggg
 1260
 gagaaagaag ctttcagaga ggaccttcac aacaggatgc ttctatggca tggttccagg
 1320
 atgagtaact gggtggaat cttgagccat gggcttcgaa ttgccccacc tgaagctccc
 1380
 atcacaggtt acatgtttgg gaaaggaatc tactttgctg acatgtcttc caagagtgcc
 1440
 aattactgct ttgcctctcg cctaaagaat acaggactgc tgctcttacc agaggtagct
 1500
 ctaggtcagt gtaatgaact actagaggcc aatcctaagg ccgaaggatt gcttcaaggt
 1560
 aaacatagca ccaaggggct gggcaagatg gctcccagtt ctgcccactt cgtcaccttg
 1620
 aatgggagta cagtgccatt aggaccagca agtgacacag gaattctgaa tccagatggg
 1680
 tataacctca actacaatga atatattgta tataacccca accagggtccg tatgcggtac
 1740
 cttttaagg ttcagtttaa tttccttcag ctgtggtgaa tgttgatatt aaataaacca
 1800
 gagatctgat cttcaagcaa gaaaataagc agtggtgtac ttgtgaattt tgtgatattt
 1860
 tatgtaataa aaactgtaca ggtctaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1912

<210> 5346

<211> 534

<212> PRT

<213> Homo sapiens

<400> 5346

Met	Pro	Val	Ala	Gly	Gly	Lys	Ala	Asn	Lys	Asp	Arg	Thr	Glu	Asp	Lys
1				5				10					15		
Gln	Asp	Gly	Met	Pro	Gly	Arg	Ser	Trp	Ala	Ser	Lys	Arg	Val	Ser	Glu
			20					25					30		
Ser	Val	Lys	Ala	Leu	Leu	Leu	Lys	Gly	Lys	Ala	Pro	Val	Asp	Pro	Glu
			35				40					45			
Cys	Thr	Ala	Lys	Val	Gly	Lys	Ala	His	Val	Tyr	Cys	Glu	Gly	Asn	Asp

<210> 5344
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 5344
 Ser Arg Ser Leu Arg Gln Gly Arg Leu Tyr Arg Gln Pro Lys Phe Leu
 1 5 10 15
 Arg Thr Met Asp Val Phe Asp Met Glu Gln Gly Gly Trp Leu Lys Met
 20 25 30
 Glu Arg Ser Phe Phe Leu Lys Lys Arg Arg Ala Asp Phe Val Ala Gly
 35 40 45
 Ser Leu Ser Gly Arg Val Ile Val Ala Gly Gly Leu Gly Asn Gln Pro
 50 55 60
 Thr Val Leu Glu Thr Ala Glu Ala Phe His Pro Gly Lys Asn Lys Trp
 65 70 75 80
 Glu Ile Leu Pro Ala Met Pro Thr Pro Arg Cys Ala Cys Ser Ser Ile
 85 90 95
 Val Val Lys Asn Cys Leu Leu Ala Val Gly Gly Val Asn Gln Gly Leu
 100 105 110
 Ser Asp Ala Val Glu Ala Leu Cys Val Ser Asp Ser
 115 120

<210> 5345
 <211> 1912
 <212> DNA
 <213> Homo sapiens

<400> 5345
 nnctagaatt cagcggccgc tgaattctag gcggcgccgc gccgacggag caccggcggc
 60
 ggcagggcga gagcattaaa tgaaagcaaa agagttaata atggcaacac ggctccagaa
 120
 gactcttccc ctgccaagaa aactcgtaga tgccagagac aggagtcgaa aaagatgcct
 180
 gtggctggag gaaaagctaa taaggacagg acagaagaca agcaagatgg tatgccagga
 240
 aggtcatggg ccagcaaaaag ggtctctgaa tctgtgaagg ccttgctgtt aaagggcaaa
 300
 gctcctgtgg acccagagtg tacagccaag gtggggaagg ctcatgtgta ttgtgaagga
 360
 aatgatgtct atgatgtcat gctaaatcag accaatctcc agttcaacaa caacaagtac
 420
 tatctgattc agctattaga agatgatgcc cagaggaact tcagtgtttg gatgagatgg
 480
 ggccgagttg ggaaaatggg acagcacagc ctggtggctt gttcaggcaa tctcaacaag
 540
 gccaaaggaaa tctttcagaa gaaattcctt gacaaaacga aaaacaattg ggaagatcga
 600
 gaaaagtgtg agaaggtgcc tggaaaatat gatatgctac agatggacta tgccaccaat
 660
 actcaggatg aagaggaaac aaagaaagag gaatctctta aatctccctt gaagccagag
 720

530		535		540
Leu Tyr Phe Arg Asp Arg Leu Gly Asp Thr Phe Arg Trp Lys Gly Glu				
545		550		555
Asn Val Ser Thr His Glu Val Glu Gly Val Leu Ser Gln Val Asp Phe				560
	565		570	575
Leu Gln Gln Val Asn Val Tyr Gly Val Cys Val Pro Gly Cys Glu Gly				
	580		585	590
Lys Val Gly Met Ala Ala Val Gln Leu Ala Pro Gly Gln Thr Phe Asp				
	595		600	605
Gly Glu Lys Leu Tyr Gln His Val Arg Ala Trp Leu Pro Ala Tyr Ala				
	610		615	620
Thr Pro His Phe Ile Arg Ile Gln Asp Ala Met Glu Val Thr Ser Thr				
625		630		635
Phe Lys Leu Met Lys Thr Arg Leu Val Arg Glu Gly Phe Asn Val Gly				640
	645		650	655
Ile Val Val Asp Pro Leu Phe Val Leu Asp Asn Arg Ala Gln Ser Phe				
	660		665	670
Arg Pro Leu Thr Ala Glu Met Tyr Gln Ala Val Cys Glu Gly Thr Trp				
	675		680	685
Lys Leu				
690				

<210> 5343

<211> 752

<212> DNA

<213> Homo sapiens

<400> 5343

tctagaagcc tgcggcaagg tcgcctctac cggcagccca agttcctgcg gacgatggac
60
gtgttcgaca tggaacaggg gggatggctg aagatggaac gatcggttctt cctcaagaag
120
cggcgggcag attttgtggc tggctctctg agtggacggg tcatagtggc tgggggactt
180
gggaatcaac cactgtcct ggagacggcg gaagcattcc acccagggaa gaacaaatgg
240
gagatcctcc ctgccatgcc cacaccccg tgtgcctgct ccagcatagt cgtcaagaac
300
tgctcctcg ctgtgggagg tgtcaaccag ggtctgagt acgcagtgga ggcctgtgt
360
gtctctgact cctagctgtc tctgggctca gtaccttgc cctggaccat atcacttcac
420
tcttaacatg aggaatgatc ttgtccaagc agtcggggct acttccaaga atgtcagctc
480
ctgttagcaa ccagtggagt ctggccttgg ggctctaagt tgacctctct atagctccaa
540
atcctaccaa tctcagaaaa ctgtaagagg cacagatgac tccaccagct gcagagctga
600
ctctgaagag agtcttcact tactgcacag gcaaagaaag gcacaggaat atttcctacc
660
tctcctcct gtgagtccca cctcccccca ccccatctc caggaggcag gtagagcagt
720
tctgaccgag aggatagact gctgttgctg tc
752

```

      100      105      110
Pro Asp Thr Phe Val Asp Ala Phe Glu Arg Arg Ala Arg Ala Gln Pro
      115      120      125
Gly Arg Ala Leu Leu Val Trp Thr Gly Pro Gly Ala Gly Ser Val Thr
      130      135      140
Phe Gly Glu Leu Asp Ala Arg Ala Cys Gln Ala Ala Trp Ala Leu Lys
145      150      155      160
Ala Glu Leu Gly Asp Pro Ala Ser Leu Cys Ala Gly Glu Pro Thr Ala
      165      170      175
Leu Leu Val Leu Ala Ser Gln Ala Val Pro Ala Leu Cys Met Trp Leu
      180      185      190
Gly Leu Ala Lys Leu Gly Cys Pro Thr Ala Trp Ile Asn Pro His Gly
      195      200      205
Arg Gly Met Pro Leu Ala His Ser Val Leu Ser Ser Gly Ala Arg Val
      210      215      220
Leu Val Val Asp Pro Asp Leu Arg Glu Ser Leu Glu Glu Ile Leu Pro
225      230      235      240
Lys Leu Gln Ala Glu Asn Ile Arg Cys Phe Tyr Leu Ser His Thr Ser
      245      250      255
Pro Thr Pro Gly Val Gly Ala Leu Gly Ala Ala Leu Asp Ala Ala Pro
      260      265      270
Ser His Pro Val Pro Ala Asp Leu Arg Ala Gly Ile Thr Trp Arg Ser
      275      280      285
Pro Ala Leu Phe Ile Tyr Thr Ser Gly Thr Thr Gly Leu Pro Lys Pro
      290      295      300
Ala Ile Leu Thr His Glu Arg Val Leu Gln Met Ser Lys Met Leu Ser
305      310      315      320
Leu Ser Gly Ala Thr Ala Asp Asp Val Val Tyr Thr Val Leu Pro Leu
      325      330      335
Tyr His Val Met Gly Leu Val Val Gly Ile Leu Gly Cys Leu Asp Leu
      340      345      350
Gly Ala Thr Cys Val Leu Ala Pro Lys Phe Ser Thr Ser Cys Phe Trp
      355      360      365
Asp Asp Cys Arg Gln His Gly Val Thr Val Ile Leu Tyr Val Gly Glu
      370      375      380
Leu Leu Arg Tyr Leu Cys Asn Ile Pro Gln Gln Pro Glu Asp Arg Thr
385      390      395      400
His Thr Val Arg Leu Ala Met Gly Asn Gly Leu Arg Ala Asp Val Trp
      405      410      415
Glu Thr Phe Gln Gln Arg Phe Gly Pro Ile Arg Ile Trp Glu Val Tyr
      420      425      430
Gly Ser Thr Glu Gly Asn Met Gly Leu Val Asn Tyr Val Gly Arg Cys
      435      440      445
Gly Ala Leu Gly Lys Met Ser Cys Leu Leu Arg Met Leu Ser Pro Phe
      450      455      460
Glu Leu Val Gln Phe Asp Met Glu Ala Ala Glu Pro Val Arg Asp Asn
465      470      475      480
Gln Gly Phe Cys Ile Pro Val Gly Leu Gly Glu Pro Gly Leu Leu Leu
      485      490      495
Thr Lys Val Val Ser Gln Gln Pro Phe Val Gly Tyr Arg Gly Pro Arg
      500      505      510
Glu Leu Ser Glu Arg Lys Leu Val Arg Asn Val Arg Gln Ser Gly Asp
      515      520      525
Val Tyr Tyr Asn Thr Gly Asp Val Leu Ala Met Asp Arg Glu Gly Phe

```

ctctctccgaa tgctgtcccc ctttgagctg gtgcagttcg acatggaggc ggcggagcct
 1500
 gtgagggaca atcagggctt ctgcatccct gtagggctag gggagccggg gctgctgctg
 1560
 accaaggtgg taagccagca acccttcgtg ggctaccgcg gccccgaga gctgtcggaa
 1620
 cggaagctgg tgcgcaacgt gcggcaatcg ggcgacgttt actacaacac cggggacgta
 1680
 ctggccatgg accgcgaagg ctctctctac ttccgcgacc gcctcgggga caccttccga
 1740
 tggaagggcg agaacgtgtc cacgcacgag gtggagggcg tgttgctgca ggtggacttc
 1800
 ttgcaacagg ttaacgtgta tggcgtgtgc gtgccagggt gtgagggtaa ggtgggcatg
 1860
 gctgctgtgc agctagcccc cggccagact ttccgacggg agaagttgta ccagcacgtt
 1920
 cgcgtttggc tccctgccta cgctaccccc catttcatcc gcattccagga cgccatggag
 1980
 gtcaccagca cgttcaaact gatgaagacc cggttggtgc gtgagggctt caatgtgggg
 2040
 atcgtggttg accctctgtt tgtactggac aaccggggcc agtccttccg gccctgacg
 2100
 gcagaaatgt accaggctgt gtgtgagggg acctggaagc tctgatcacc tggccaaccc
 2160
 actggggtag gggtagggat caaagccagc cccccccacc ccaacacact cgggtgtccct
 2220
 ttcattctgg gcctgtgtga atcccagcct ggccataccc tcaacctcag tgggctggaa
 2280
 atgacagtgg gccctgtagc agtggcagaa taaactcaga tgtgttcaca aaaaaaaca
 2340
 cgcacgaggt ggagggcggt ttgtcgcagg tggacttctt gcaacagggt aacgtgtatg
 2400
 gcgtgtgcgt gccaggttgt gagggtaagg tgggcatggc tgctgtgcag ctagc
 2455

<210> 5342

<211> 690

<212> PRT

<213> Homo sapiens

<400> 5342

Met	Gly	Val	Arg	Gln	Gln	Leu	Ala	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu
1				5				10					15		
Leu	Trp	Gly	Leu	Gly	Gln	Pro	Val	Trp	Pro	Val	Ala	Val	Ala	Leu	Thr
		20						25					30		
Leu	Arg	Trp	Leu	Leu	Gly	Asp	Pro	Thr	Cys	Cys	Val	Leu	Leu	Gly	Leu
		35					40					45			
Ala	Met	Leu	Ala	Arg	Pro	Trp	Leu	Gly	Pro	Trp	Val	Pro	His	Gly	Leu
	50					55					60				
Ser	Leu	Ala	Ala	Ala	Ala	Ala	Leu	Thr	Leu	Leu	Pro	Ala	Arg	Leu	
65				70					75					80	
Pro	Pro	Gly	Leu	Arg	Trp	Leu	Pro	Ala	Asp	Val	Ile	Phe	Leu	Ala	Lys
			85					90						95	
Ile	Leu	His	Leu	Gly	Leu	Lys	Ile	Arg	Gly	Cys	Leu	Ser	Arg	Gln	Pro

<210> 5341
<211> 2455
<212> DNA
<213> Homo sapiens

<400> 5341
nnatgagctg caggtacggt ccggaatccc gggtcgaccc acgcgtccgg ctccctagggg
60
ggagctggta ccatgggtgt caggcaacag ttggccttgc tgctgctgct gctgctcctg
120
ctctggggcc tggggcagcc agtgtggcca gtcgctgtgg ccttgaccct gcgctggcte
180
ctgggggatc ccacatgttg cgtgctactt gggctggcca tgtagcacg gccctggcte
240
ggccccctggg tgccccatgg gctgagcctg gcagctgcgg ccctggcact aaccctcctg
300
ccagcacggc tgcccccagg actacgctgg ctgccggctg atgtgatctt cttggccaag
360
atcctccacc tgggectgaa gatcagggga tgcttgagcc ggcagccgcc tgacacctt
420
gtagatgcct tcgagcggcg agcacgagcg cagcctggca gggcactctt ggtgtggacg
480
gggacctgggg ccggctcagt cacctttggt gagctggatg cccgggctg ccaggcggca
540
tgggccccga aggctgagct gggtgaccct gcgagcctgt gtgccgggga gcctactgcc
600
ctccttgtgc tggttccca ggccgttcca gccctgtgta tgtggctggg gctggccaag
660
ctgggctgcc caacagcctg gatcaacccg catggccggg ggatgcccct ggcgactct
720
gtgctgagct ctggggcccg ggtgctggtg gtggaccag acctccggga gagcctggag
780
gagatccttc ccaagctgca ggctgagaac atccgctgct tctacctcag ccatacctcc
840
cctacaccag ggggtggggc tctgggggct gccctggatg cagcgccctc ccaccagtg
900
cctgctgacc tgctgctgg gatcacatgg agaagccctg ccctcttcat ctatacctcg
960
gggaccactg gcctcccgaa gccagccatc ctacgcatg agcgggtact gcagatgagc
1020
aagatgctgt cttatcttg ggccacagct gatgatgtgg ttacacggc cctgcctctg
1080
taccacgtga tgggacttgt cgttgggatc ctcgctgct tagatctcgg agccacctgt
1140
gttctggccc ccaagtctc tacttctgc ttctgggatg actgtcgga gcatggcgtg
1200
acagtgatcc tgtatgtgg cgagctcctg cggtaactgt gtaacattcc ccagcaacca
1260
gaggaccgga cacatacagt ccgctggca atgggcaatg gactacgggc tgatgtgtgg
1320
gagaccttc agcagcgtt cggctctatt cggatctggg aagtctacgg ctccacagaa
1380
ggcaacatgg gcttagtcaa ctatgtgggg cgctgcgggg ccctgggcaa gatgagctgc
1440

gatgctctta atgaaattgt gcgatgtatt tgtgagatgg atgaggagaa tggcttcattg
 420
 atccagtgtg aagagtgctt gtgttggcaa cacagcgtgt gcatggggct gctggaggag
 480
 agcattccag agcagtagat ctgctatatc tgccggggacc caccaggtca gaggtggagt
 540
 gcaaaatatc gttatgataa ggagtgggtg aataatggga gaatgtgcgg gttatcattt
 600
 ttcaaagaaa attattctca tctcaatgcc aaaaagatag tttctacaca tcacctgctt
 660
 gctgatgtct atggtgttac agaagtgcta cacgggctac agctgaagat tggaatacta
 720
 aagaataaac atcatcctga ccttcattctc tgggcttgtt ccggaagcg aaaagaccaa
 780
 gatcaataa tagctggggg ggagaaaaaa atagctcaag acacagttaa tcgagaagaa
 840
 aaaaaaa
 847

<210> 5340
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 5340
 His Glu Asn Arg Lys Val Val Leu Ser Ile Leu Phe Val Tyr Ile Leu
 1 5 10 15
 Asp Leu Ser Asp Val Asp Phe Leu Asp Asp Ser Ser Thr Glu Ser Leu
 20 25 30
 Leu Leu Ser Gly Asp Glu Tyr Asn Gln Asp Phe Asp Ser Thr Asn Phe
 35 40 45
 Glu Glu Ser Gln Asp Glu Asp Asp Ala Leu Asn Glu Ile Val Arg Cys
 50 55 60
 Ile Cys Glu Met Asp Glu Glu Asn Gly Phe Met Ile Gln Cys Glu Glu
 65 70 75 80
 Cys Leu Cys Trp Gln His Ser Val Cys Met Gly Leu Leu Glu Glu Ser
 85 90 95
 Ile Pro Glu Gln Tyr Ile Cys Tyr Ile Cys Arg Asp Pro Pro Gly Gln
 100 105 110
 Arg Trp Ser Ala Lys Tyr Arg Tyr Asp Lys Glu Trp Leu Asn Asn Gly
 115 120 125
 Arg Met Cys Gly Leu Ser Phe Phe Lys Glu Asn Tyr Ser His Leu Asn
 130 135 140
 Ala Lys Lys Ile Val Ser Thr His His Leu Leu Ala Asp Val Tyr Gly
 145 150 155 160
 Val Thr Glu Val Leu His Gly Leu Gln Leu Lys Ile Gly Ile Leu Lys
 165 170 175
 Asn Lys His His Pro Asp Leu His Leu Trp Ala Cys Ser Gly Lys Arg
 180 185 190
 Lys Asp Gln Asp Gln Ile Ile Ala Gly Val Glu Lys Lys Ile Ala Gln
 195 200 205
 Asp Thr Val Asn Arg Glu Glu Lys Lys
 210 215

tattacacta gggtttactt tgaaatatag tttaacaacca aatcaagtat aacatacata
 2520
 cactggcact ttagcacaag ggcaacttt aaaaacaagt tttttggac ctttaaaatt
 2580
 aggccatatt ataaaaaaca gtccacggtc ttacattcag caaattcata ctaaaatact
 2640
 ccatttttgt aagataaagg ccaagaaaac ttacatatg ctacaagttt attacagata
 2700
 ttacatggc tctttctccc ctaaggactt aaaattttca ca
 2742

<210> 5338

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5338

Met	Gly	Gly	Gly	Glu	Arg	Tyr	Asn	Ile	Pro	Ala	Pro	Gln	Ser	Arg	Asn
1				5					10					15	
Val	Ser	Lys	Asn	Gln	Gln	Gln	Leu	Asn	Arg	Gln	Lys	Thr	Lys	Glu	Gln
			20					25					30		
Asn	Ser	Gln	Met	Lys	Ile	Val	His	Lys	Lys	Lys	Glu	Arg	Gly	His	Gly
		35				40						45			
Tyr	Asn	Ser	Ser	Ala	Ala	Ala	Trp	Gln	Ala	Met	Gln	Asn	Gly	Gly	Lys
	50				55					60					
Asn	Lys	Asn	Phe	Pro	Asn	Asn	Gln	Ser	Trp	Asn	Ser	Ser	Leu	Ser	Gly
65					70					75				80	
Pro	Arg	Leu	Leu	Phe	Lys	Ser	Gln	Ala	Asn	Gln	Asn	Tyr	Ala	Gly	Ala
			85					90					95		
Lys	Phe	Ser	Glu	Pro	Pro	Ser	Pro	Ser	Val	Leu	Pro	Lys	Pro	Pro	Ser
			100				105						110		
His	Trp	Val	Pro	Val	Ser	Phe	Asn	Pro	Ser	Asp	Lys	Glu	Ile	Met	Thr
		115					120					125			
Phe	Gln	Leu	Lys	Thr	Leu	Leu	Lys	Val	Gln	Val					
		130					135								

<210> 5339

<211> 847

<212> DNA

<213> Homo sapiens

<400> 5339

nngacacttt gagttactta taatagtgt tactataaga tataaagcag tcataattac
 60
 ctaagcttca aaaatctttt gtttccatgt ccagagacaa gtacagtaca gtattcttat
 120
 ttgtttgctc ccccttttta aaatatttaa tagcttatgt tcacttctca tagctccttt
 180
 ctttatgaaa aataacatga aaatagaaaa gttgttctaa gtatactttt tgtatatatt
 240
 ctagacttat cagatgtaga cttcctagat gattcttcaa cggagagttt gcttctgagt
 300
 ggggatgaat acaatcagga ctttgattca accaattttg aggaatctca ggatgaggat
 360

aatccttcag ataaggaaat aatgacattt caacttaaaa ccttacttaa agtacaggta
900
taaaataaga caaatgttta aatttagtta tgttcacgga tagttgtcaa ttggtctgaa
960
acaaattcgc tagggaatct atttgtgtag aactaattaa tgtaaaaaaa acagaccatc
1020
tcgtgttggtg tgcactgtga tataatggta gtatcagtgc aacttaaact aatgattgta
1080
cttgatatta agtgttctca actgagtaac ttttaagtgg aaaccaagtt tagatttggg
1140
gagtggtaaa ggaatcagct ttttctattg ttaggggaag acagtaattt atcattcatg
1200
gaccagtaga ttgttgaaag ttggtgaatc ggattataag cttctagcta acacaaggat
1260
tcagaattag gtaaaccatct gaaggtttag tatattagaa acacccaaac cagtaatatg
1320
ctaacctgat gcactgctga aagaaaatgt gaatttttcg taataattgc attttagtga
1380
attgtacagt ggggtggaaag ggcatttgga gctcattaga atgagacata gtacacccca
1440
atggccctgt ttattaaatg tagtggatta agtgtctgtc aacaaatata ccaaaccat
1500
tttttataga aacagtattt aatggtcact caatagcttt caaaatacat ttttgtatta
1560
cagcactgea caagctattc taatagtgtc ctggcctcat cattcctgca aagcttgctt
1620
tggggagttg gataatgtga aaattttaag tacctagggg agaaagagcc atgtaaatat
1680
ctgtaataaa cttgtagcat atgtaaagtt ttcttgccct ttatcttaca aaaatggagt
1740
atttttagtat gaatttgctg aatgtaagac cgtggactgt tttttataat atggccta
1800
tttaaaggtc caaaataact tgtttttaaa gtttgccctt gtgctaaagt gccagtgtat
1860
gtatgttata cttgatttgg ttgtaaacta ttttcaaag taaaccctag tgtaataagt
1920
tttataacta aaaaggttgc ttcacattca tatcatgtac attaagtact acataaactt
1980
gtctttaggc tatcaatatt taacttgggc agtacttcat cttgatttat ttggagaaat
2040
acagcttagg catctgctta cctgcttagg catcaagagg tgccaaatta gaaaataggg
2100
cattaacaat caaaattttt aagctgaccc acatacttgc tactgggttc gcttatgttt
2160
aagcatttaa agttggcaaa acatgttatc aatgtattat gcaagagttt acatcttttg
2220
cataagtggg ccattgggtt gcacctaccc cttgaccaa caaaaacaaa acatcactgg
2280
caccatactc gaaactacct gtatcctagg ttataagatt gtgaaagcca acaatctata
2340
aggttgagg gactctagtt aatctttggg cttagaggag gaaaaaaga tagtcccata
2400
ctgcatttca catctcttaa aaatagtttt agcagcttaa accttttttag ttataaaact
2460

610	615	620
Ala Asp Gly Ile Glu Val Ser Tyr Asn Ala Cys Gly Val Leu Ser His		
625	630	635
Ile Met Phe Asp Gly Pro Glu Ala Trp Gly Val Cys Glu Pro Gln Arg		640
	645	650
Glu Glu Val Glu Glu Arg Met Trp Ala Ala Ile Gln Ser Trp Asp Ile		655
	660	665
Asn Ser Arg Arg Asn Ile Asn Tyr Arg Ser Phe Glu Pro Ile Leu Arg		670
	675	680
Leu Leu Pro Gln Gly Ile Ser Pro Val Ser Gln His Trp Ala Thr Trp		685
	690	695
Ala Leu Tyr Asn Leu Val Ser Val Tyr Pro Asp Lys Tyr Cys Pro Leu		700
705	710	715
Leu Ile Lys Glu Gly Gly Met Pro Leu Leu Arg Asp Ile Ile Lys Met		720
	725	730
Ala Thr Ala Arg Gln Glu Thr Lys Glu Met Ala Arg Lys Val Ile Glu		735
	740	745
His Cys Ser Asn Phe Lys Glu Glu Asn Met Asp Thr Ser Arg		750
	755	760
		765

<210> 5337

<211> 2742

<212> DNA

<213> Homo sapiens

<400> 5337

```

tttttatgga tatttagttt tatttgatac acttggatgc aactttactc attaccattt
60
ttaaaccat gtttaaaagt tttaaaattt gggtagaggc agaaggagaa ggtcgggttg
120
tagaagctgg ggtggccggc agctcgctca tcggtgttcg tgggctttgt cggtcctgctg
180
ctcgtctctc tctggaaagg gagggaggct tcgacgtcga gagggagccg ctgccgcgtt
240
agttccgagc ttgaagtcac taggacttct ctcaaacttg tgtgctgagg agactcagat
300
gttggcctca gtcctaggc tgaactcagc agatcggcc atgaaaactt ctgtattgag
360
acaaaggaag ggatctgtca gaaagcaaca cttgttatct tgggcttggc agcaaggaag
420
aggacaggtg gtggagatcc tgcaatctga aaagcagact gaaagggtgac aaagaagctg
480
aagatgggtg gtggagagag gtataacatt ccagcccctc aatctagaaa tgtagtaag
540
aaccaacaac agcttaacag acagaagacc aaggaacaga attcccagat gaagattgtt
600
cataagaaaa aagaaagagg acatgggttat aactcatcag cagctgcctg gcaggccatg
660
caaatgggg ggaagaacaa aaattttcca aataatcaaa gttggaattc tagcttatca
720
ggtcccaggt tactttttta atctcaagct aatcagaact atgctggtgc caaathtagt
780
gagccgcat caccaagtgt tcttcccaaa ccaccaagcc actgggtccc tgtttcctt
840

```


	180						185						190					
Ser	Leu	Leu	Arg	Pro	Leu	Asn	Ser	Leu	Ala	Ala	Leu	Asp	Leu	Ser	Gly			
	195						200						205					
Ile	Gln	Thr	Ser	Asp	Ala	Ala	Phe	Leu	Thr	Gln	Trp	Lys	Asp	Ser	Leu			
	210						215						220					
Val	Ser	Leu	Val	Leu	Tyr	Asn	Met	Asp	Leu	Ser	Asp	Asp	His	Ile	Arg			
225	230						235						240					
Val	Ile	Val	Gln	Leu	His	Lys	Leu	Arg	His	Leu	Asp	Ile	Ser	Arg	Asp			
	245						250						255					
Arg	Leu	Ser	Ser	Tyr	Tyr	Lys	Phe	Lys	Leu	Thr	Arg	Glu	Val	Leu	Ser			
	260						265						270					
Leu	Phe	Val	Gln	Lys	Leu	Gly	Asn	Leu	Met	Ser	Leu	Asp	Ile	Ser	Gly			
	275						280						285					
His	Met	Ile	Leu	Glu	Asn	Cys	Ser	Ile	Ser	Lys	Met	Glu	Glu	Glu	Ala			
	290						295						300					
Gly	Gln	Thr	Ser	Ile	Glu	Pro	Ser	Lys	Ser	Ser	Ile	Ile	Pro	Phe	Arg			
305	310						315						320					
Ala	Leu	Lys	Arg	Pro	Leu	Gln	Phe	Leu	Gly	Leu	Phe	Glu	Asn	Ser	Leu			
	325						330						335					
Cys	Arg	Leu	Thr	His	Ile	Pro	Ala	Tyr	Lys	Val	Ser	Gly	Asp	Lys	Asn			
	340						345						350					
Glu	Glu	Gln	Val	Leu	Asn	Ala	Ile	Glu	Ala	Tyr	Thr	Glu	His	Arg	Pro			
	355						360						365					
Glu	Ile	Thr	Ser	Arg	Ala	Ile	Asn	Leu	Leu	Phe	Asp	Ile	Ala	Arg	Ile			
	370						375						380					
Glu	Arg	Cys	Asn	Gln	Leu	Leu	Arg	Ala	Leu	Lys	Leu	Val	Ile	Thr	Ala			
385	390						395						400					
Leu	Lys	Cys	His	Lys	Tyr	Asp	Arg	Asn	Ile	Gln	Val	Thr	Gly	Ser	Ala			
	405						410						415					
Ala	Leu	Phe	Tyr	Leu	Thr	Asn	Ser	Glu	Tyr	Arg	Ser	Glu	Gln	Ser	Val			
	420						425						430					
Lys	Leu	Arg	Arg	Gln	Val	Ile	Gln	Val	Val	Leu	Asn	Gly	Met	Glu	Ser			
	435						440						445					
Tyr	Gln	Glu	Val	Thr	Val	Gln	Arg	Asn	Cys	Cys	Leu	Thr	Leu	Cys	Asn			
	450						455						460					
Phe	Ser	Ile	Pro	Glu	Glu	Leu	Glu	Phe	Gln	Tyr	Arg	Arg	Val	Asn	Glu			
465	470						475						480					
Leu	Leu	Leu	Ser	Ile	Leu	Asn	Pro	Thr	Arg	Gln	Asp	Glu	Ser	Ile	Gln			
	485						490						495					
Arg	Ile	Ala	Val	His	Leu	Cys	Asn	Ala	Leu	Val	Cys	Gln	Val	Asp	Asn			
	500						505						510					
Asp	His	Lys	Glu	Ala	Val	Gly	Lys	Met	Gly	Phe	Val	Val	Thr	Met	Leu			
	515						520						525					
Lys	Leu	Ile	Gln	Lys	Lys	Leu	Leu	Asp	Lys	Thr	Cys	Asp	Gln	Val	Met			
	530						535						540					
Glu	Phe	Ser	Trp	Ser	Ala	Leu	Trp	Asn	Ile	Thr	Asp	Glu	Thr	Pro	Asp			
545	550						555						560					
Asn	Cys	Glu	Met	Phe	Leu	Asn	Phe	Asn	Gly	Met	Lys	Leu	Phe	Leu	Asp			
	565						570						575					
Cys	Leu	Lys	Glu	Phe	Pro	Glu	Lys	Gln	Glu	Leu	His	Arg	Asn	Met	Leu			
	580						585						590					
Gly	Leu	Leu	Gly	Asn	Val	Ala	Glu	Val	Lys	Glu	Leu	Arg	Pro	Gln	Leu			
	595						600						605					
Met	Thr	Ser	Gln	Phe	Ile	Ser	Val	Phe	Ser	Asn	Leu	Leu	Glu	Ser	Lys			

ctgcctcctc ctcccagcct gccccgctgc ccagaggacc ccacgcctct cagaggcaga
 3660
 ggtcccatgc cagcctttga ccacacacgg ccacacagcc gcctccagac cagcactcgg
 3720
 actgccctgc agtggccgct tgggcctccc tggcggtccc gcctgccct aggctttacc
 3780
 ttggaagcct gagaggcgcc ggctctcttg ctctccatc gatggacact gcattgcttc
 3840
 tcatcggaca cttgtggagc gcaggggcct ggggagcagc gctaaccctg gaggcagcct
 3900
 ttgggtgatg gctttttctt cccttttctt cccgcgggcc tgttttcagg tgttcctagc
 3960
 atttctgcct ccaggcagga cggcaggggt gaggagcttt gggagagaca cctggccttt
 4020
 ttctcctgga gcctctcctt cccggccctg ggaagtgggc gcagccctgt gttccccag
 4080
 cttggcagat gggctgcatg cggcgctccc ttccttccca cgctcagcgg ccccggccag
 4140
 accctggcag acttcacacc tcattgcttt accccctggg gcctggggaa atgtctgtac
 4200
 tttgggaagt cacagaaata catttttgtg caaaatggaa aaaaaaaaaa aaaaaaaaaa
 4260
 aaaaaaaaaa aaaaaaaaaa aa
 4282

<210> 5336

<211> 766

<212> PRT

<213> Homo sapiens

<400> 5336

Met	Ala	Ser	Asp	Thr	Pro	Glu	Ser	Leu	Met	Ala	Leu	Cys	Thr	Asp	Phe
1				5					10					15	
Cys	Leu	Arg	Asn	Leu	Asp	Gly	Thr	Leu	Gly	Tyr	Leu	Leu	Asp	Lys	Glu
			20					25					30		
Thr	Leu	Arg	Leu	His	Pro	Asp	Ile	Phe	Leu	Pro	Ser	Glu	Ile	Cys	Asp
		35				40						45			
Arg	Leu	Val	Asn	Glu	Tyr	Val	Glu	Leu	Val	Asn	Ala	Ala	Cys	Asn	Phe
	50				55					60					
Glu	Pro	His	Glu	Ser	Phe	Ser	Leu	Phe	Ser	Asp	Pro	Arg	Ser	Thr	
65					70				75					80	
Arg	Leu	Thr	Arg	Ile	His	Leu	Arg	Glu	Asp	Leu	Val	Gln	Asp	Gln	Asp
			85					90					95		
Leu	Glu	Ala	Ile	Arg	Lys	Gln	Asp	Leu	Val	Glu	Leu	Tyr	Leu	Thr	Asn
		100					105						110		
Cys	Glu	Lys	Leu	Ser	Ala	Lys	Ser	Leu	Gln	Thr	Leu	Arg	Ser	Phe	Ser
		115				120						125			
His	Thr	Leu	Val	Ser	Leu	Ser	Leu	Phe	Gly	Cys	Thr	Asn	Ile	Phe	Tyr
	130				135					140					
Glu	Glu	Glu	Asn	Pro	Gly	Gly	Cys	Glu	Asp	Glu	Tyr	Leu	Val	Asn	Pro
145				150					155					160	
Thr	Cys	Gln	Val	Leu	Val	Lys	Asp	Phe	Thr	Phe	Glu	Gly	Phe	Ser	Arg
			165				170						175		
Leu	Arg	Phe	Leu	Asn	Leu	Gly	Arg	Met	Ile	Asp	Trp	Val	Pro	Val	Glu

attcagaaga agctgctgga caagacatgt gaccagggtca tggagttctc ctggagtgcc
2040
ctgtggaaca tcacagatga aactcctgac aactgcgaga tgttcctcaa tttcaacggc
2100
atgaagctct tcctggactg cctgaaggaa ttcccagaga agcaggaact gcataggaat
2160
atgctaggac ttttggggaa tgtggcagaa gtgaaggagc tgaggcctca actaatgact
2220
tcccagttca tcagcgtctt cagcaacctg ttggagagca aggccgatgg gatcgagggt
2280
tcctacaatg cctgcggcgt cctctccac atcatgtttg atggaccgga ggccctggggc
2340
gtctgtgagc cccagcgtga ggaggtggag gaacgcatgt gggctgccat ccagagctgg
2400
gacataaact ctcggagaaa catcaattac aggtcatttg aaccaattct ccgcctcctt
2460
ccccagggaa tctctcctgt cagccagcac tgggcaacct gggccctgta taacctcgtg
2520
tctgtctacc cggacaagta ctgccctctg ctgatcaaag aaggggggat gcccttctg
2580
agggacataa ttaagatggc gaccgcacgg caggagacca aggaaatggc ccgcaagggtg
2640
attgagcact gcagtaactt taaagaggag aacatggaca cgtctagata gaggcctccg
2700
tccccatggc cgccaccgct ctggaccaca ggcggggagg aagcatgctc aagcagccca
2760
gcgggcgggc cccttccgag ggagcctccc acggagtgaa gagacatggg ggacttttgc
2820
acaaccgacg cttttcctta atgttagtga gatatatata tattatatat atatattttt
2880
tttttggtta ggaagtgtga agttttgtgt gtatgatttc tgtgcaaaaa caaaagcaac
2940
actcctgagt ccttgcagct tccttggcca ttctcaaacc cactcagcct tcatcgctga
3000
cacacacact cctaccccaa ccagactaaa tgcctataac gctgtgagtg tccagtcctt
3060
gtccaggaaa ctcagatccc ggccctggctt cctttcatga gaggagcagg ccttggacag
3120
cgtatcgagc atcctgaccc actgcccctg cctgagaacg ccatcttggc tcccgggcac
3180
agctgatggg gtttggggat tagaacttac cccactgggt ctcccaaaag ccttgggtgct
3240
cccggctgtg ggccatctgg ggcaggaaag tgagccattc ctaggctgag gtccaggcag
3300
ccctgcccct gaagaccctc taggagcagg gcacccagtg gccctgctgc tgtccagcca
3360
ggcctgcctg aggccacgct gctatggagg ctgcctccta gtctcccacc aggtcccagg
3420
ctgtggaaag ccccagccca gggatgggtca gaactcgggg gcagattcca ctgccccttc
3480
tgccaaacac atccagaacc tgccctcagc cctggaagct agcatcttct ggggccaggg
3540
gcttgcttcc tcgtccata gccctcaact gcccaggcgc tcccaccagc agaactgagc
3600

cctggagtggtg cccacctgct tgccccagc atggcgctccg acactcccca gtcgctgatg
420
gccctctgta ctgacttctg cttgcgcaac ctggatggca ccctgggcta cctgctggac
480
aaggagaccc tgcggctaca tccggacatc ttcttgccca gcgagatctg tgaccggctc
540
gtcaatgagt atgtggagct ggtgaacgct gcctgtaact tcgagccaca cgagagcttc
600
ttcagcctct tttcgaccc cgcgagcacc cgcctcacgc ggatccacct ccgtgaggac
660
ctggtgcagg accaggacct ggaggccatc cgcaagcagg acctgggtgga gctgtacctg
720
actaactgcg agaagctgtc cgccaagagc ctgcagacac tgaggagctt cagccacacc
780
ctggtgtcct tgagcctctt cggctgtaca aacattttct atgaggagga gaaccaggg
840
ggctgtgaag atgagtacct cgtcaacccc acctgccagg tgctgggttaa ggatttcacc
900
ttcgagggct tcagccgctt ccgcttcctc aacttgggccc gcatgattga ttgggtccct
960
gtggagtccc tgctgcggcc gcttaactcc ctggctgctt tggacctctc aggcattcag
1020
acgagcgacg cagccttctt caccagtggt aaagacagcc tgggtgctct cgtcctctac
1080
aacatggacc tgtccgacga ccacatccgg gtcacgtgc agctgcacaa gctgcgacac
1140
ctggacatct cccgagaccg cctctccagc tactacaagt tcaagctgac tcgggagggtg
1200
ctgagcctct ttgtgcagaa gctggggaac ctaatgtccc tggacatctc tggccacatg
1260
atcctagaga actgcagcat ctccaagatg gaagaggaag cggggcagac cagcattgag
1320
ccttccaaga gcagcatcat acctttccgg gctctgaaga ggccgctgca gttcctcggg
1380
ctctttgaga actctctgtg ccgcctcacg cacattccag cctacaaagt aagtgggtgac
1440
aaaaacgaag agcagggtgct gaatgccatc gaggcctaca cggagcaccg gcctgagatc
1500
acctcgggg ccatcaactt gctttttgac atcgcccga tcgagcggtg caaccagctg
1560
ctgcggggccc tgaagctggt catcacggcc ctcaagtgcc acaaatatga caggaacatt
1620
caagtgcag gcagcgccgc tctcttctac ctaacaaatt ccgagtaccg ctgagagcag
1680
agtgtgaagc tgcgcccga ggttatccag gtggtgctga atggcatgga atcctaccag
1740
gagggtgacg tgcagcggaa ctgctgcctg acgctctgca acttcagcat ccccgaggag
1800
ctggaattcc agtaccgccc ggtcaacgag ctctgctca gcatcctcaa cccacgccc
1860
caggacgagt ctatccagcg gatcgccgtg cacctgtgca atgcctgggt ctgccaggta
1920
gacaacgacc acaaggaggc cgtgggcaag atgggctttg tcgtgaccat gctgaagctg
1980

<400> 5334

Glu Pro Pro Gly Ala Val Val Leu Pro Arg Ser Leu Glu Val Gly Arg
 1 5 10 15
 Glu Arg Thr Trp Arg Pro Gly Ser Met Ala Gly Leu Glu Leu Leu Ser
 20 25 30
 Asp Gln Gly Tyr Arg Val Asp Gly Arg Arg Xaa Arg Glu Leu Arg Lys
 35 40 45
 Ile Gln Ala Arg Met Gly Val Phe Ala Gln Ala Asp Gly Ser Ala Tyr
 50 55 60
 Ile Glu Gln Gly Asn Thr Lys Ala Leu Ala Val Val Tyr Gly Pro His
 65 70 75 80
 Glu Ile Arg Gly Ser Arg Ala Arg Ala Leu Pro Asp Arg Ala Leu Val
 85 90 95
 Asn Cys Gln Tyr Ser Ser Ala Thr Phe Ser Thr Gly Glu Arg Lys Arg
 100 105 110
 Arg Pro His Gly Asp Arg Lys Ser Cys Glu Met Gly Leu Gln Leu Arg
 115 120 125
 Gln Thr Phe Glu Ala Ala Ile Leu Thr Gln Leu His Pro Arg Ser Gln
 130 135 140
 Ile Asp Ile Tyr Val Gln Val Leu Gln Ala Asp Gly Gly Thr Tyr Ala
 145 150 155 160
 Ala Cys Val Asn Ala Ala Thr Leu Ala Val Leu Asp Ala Gly Ile Pro
 165 170 175
 Met Arg Asp Phe Val Cys Ala Cys Ser Ala Gly Phe Val Asp Gly Thr
 180 185 190
 Ala Leu Ala Asp Leu Ser His Val Glu Glu Ala Ala Gly Gly Pro Gln
 195 200 205
 Leu Ala Leu Ala Leu Leu Pro Ala Ser Gly Gln Ile Ala Leu Leu Glu
 210 215 220
 Met Asp Ala Arg Leu His Glu Asp His Leu Glu Arg Val Leu Glu Ala
 225 230 235 240
 Ala Ala Gln Ala Ala Arg Asp Val His Thr Leu Leu Asp Arg Val Val
 245 250 255
 Arg Gln His Val Arg Glu Ala Ser Ile Leu Leu Gly Asp
 260 265

<210> 5335

<211> 4282

<212> DNA

<213> Homo sapiens

<400> 5335

gccggatcgg cggagggggcc gggccagggg gcctcagccc cgccggcagc cctaaggcga
 60
 aggtaaccgc cacgggggtcc ccgtcgcgac cccctccctc ccggagctcc cgtccccggg
 120
 atcccaagct ccgccccgcc gacccccgtc tcccctggac cccggctcta gcctgacgag
 180
 atccccaacc tcttgaggtg ctctggcccc ggattctccc gggctgcatt ctctgctcct
 240
 cctgcctgc gaagcatcac gtccgcttcc cgacgctgag ggcagccccg tccagggcag
 300
 tggctctgcc aatgatcctg tgagtattca ggaatcactg ttgcccctgg ggatccttgt
 360

<213> Homo sapiens

<400> 5332

Lys	Phe	Ala	Leu	Glu	Tyr	Arg	Thr	Thr	Arg	Glu	Arg	Val	Leu	Gln	Gln
1				5					10					15	
Lys	Gln	Lys	Arg	Ala	Asn	His	Arg	Glu	Arg	Asn	Lys	Thr	Arg	Gly	Lys
			20					25					30		
Met	Ile	Thr	Asp	Ser	Gly	Lys	Phe	Ser	Gly	Ser	Ser	Pro	Ala	Pro	Pro
		35					40					45			
Ser	Gln	Pro	Gln	Gly	Leu	Ser	Tyr	Ala	Xaa	Gly	Arg	Gly			
		50				55					60				

<210> 5333

<211> 883

<212> DNA

<213> Homo sapiens

<400> 5333

gagccgccgg gagctgtagt tctcccgcgg tcaactggaag taggcagaga gcggacctgg
60
cgcccgggca gcatggcggg gctggagctc ttgtcggacc agggctaccg ggtggacggg
120
cggcgcnngc gggagctgcg caagatccag gcgcggatgg gcgtgttcgc gcaggctgac
180
ggctcggcct acattgagca gggcaacacc aaggcactgg ctgtggtcta cgccccgcac
240
gagatccggg gctcccgggc tcgagccctg ccggacaggg ccctagtga ctgtcaatat
300
agttcagcga ccttcagcac aggtgagcgc aagcgacggc cacatgggga ccgtaagtcc
360
tgtgagatgg gcctgcagct ccgccagact ttcgaagcag ccatcctcac acagctgcac
420
ccacgctccc agattgatat ctatgtgcag gtgctacagg cagatggtgg gacctatgca
480
gcttgtgtga atgcagccac gctggcagtg ctggatgccg ggatacccat gagagacttt
540
gtgtgtgctg gctcagctgg cttcgtggac ggcacagccc tggcggacct cagccatgtg
600
gaggaagcag ctggtggccc ccagctggcc ctggccctgc tgccagcctc aggacagatt
660
gcgctgcttg agatggatgc ccggtgcac gaggaccacc tggagcgggt gttggaggct
720
gctgcccagg ctgcccagaga tgtgcacacc ctcttagatc gagtgggtccg gcagcatgtg
780
cgtgaggcct ctatcttgct gggggactga ccaccagcc acccatgtcc agaataaaa
840
cctcctctgc ccacaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
883

<210> 5334

<211> 269

<212> PRT

<213> Homo sapiens

	260		265		270										
His	Pro	Glu	Ala	Ala	Gln	Glu	Ile	Glu	Val	Glu	Leu	Glu	Leu	Ser	Lys
	275				280					285					
Glu	Met	Val	Ser	Leu	Leu	Pro	Thr	Lys	Met	Glu	Arg	Phe	Arg	Thr	Lys
	290				295					300					
Met	Ala	Leu	Thr												
305															

<210> 5331

<211> 1069

<212> DNA

<213> Homo sapiens

<400> 5331

```

aaatttgac tagagtatcg cacaaccagg gaaagggttt tgcagcagaa acagaaacgg
60
gccaaccaca gagagagaaa taagaccaga gggaagatga tcaccgattc tggcaagttc
120
tccggcagtt ctccggcgcc cccaagccag ccgcagggtc tgagctatgc gngaggacgc
180
ggctgagcac gagaacatga aggctgtgct gaaaacctcg tccccctccg tggaggacgc
240
cacccccgag ctgggcgtcc gcacacgcag ccgagcaagc cgnnaggatc cactagttcc
300
tggactatgg gaactgatga ctgcccgaat gtcacagatg atgcagctga tgagatcatg
360
gaccgcatcg tcaagtcagc cacccaagtg ccagtcagc gagtgggtgcc gagggagagg
420
aaacgatccc gggccaaccg gaaatctttg cgaagaacct tgaagagcgg cctgaccccc
480
gaagaagcca gagccctggg cttgggtggc acctcggagt tgcagctgtg acactcatag
540
gttactccca ggagtgtgct gagcagaagg caagctcttg ctggatgaaa cccctccagg
600
tgggggtggg gagacttgat attcacatcc aacagtttga aaaggagag ctcaattccc
660
agcgtcacc catggcttgt gttgcctgct acgcattgac ttggatctcc aggagtcacc
720
tgcacatacc ttctccatcg tgtcagctgt gtttctcttg attccgtgac acccggttta
780
ttagttcaaa agtgtgacac cttttctggg caaggaacag cccctttaag gagcaaatca
840
cttctgtcac agttattatg gtaatatgag gcaatctgat tagcttcaca gactgagtct
900
ccacaacacc aaaatatcca gatgtaaacc ccaaacttgt acacaaaaga aagcacagat
960
tgtttacctg ttgtggattt tagatgtaac aatggtttat acaaatacat acatgtacac
1020
catgtttcaa atactaaata aatagagttt aatgccaaaa aaaaaaaaaa
1069

```

<210> 5332

<211> 61

<212> PRT

tacagacatt tctaccctca gtttctaaat gtagactatt tgttggctag tacttgatag
 2280
 attccttgta agaaaaaatg ctgggtaatg tacctggtaa caagcctggt aatatattaa
 2340
 gattgaaaaa gtaacttcta tagttactcc ttctaaaata tttgacttcc tacattcccc
 2400
 ccacccaaaa tctttccctt ttgaaaatac taaaaactaa gttatgttat tataaagtgt
 2460
 aaaatgggtt gtcttaatta taggagaaaa aggccttggt agaaataaaa taaactgact
 2520
 tatttcacta atgaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagaaaaa
 2580
 aa
 2582

<210> 5330
 <211> 308
 <212> PRT
 <213> Homo sapiens

<400> 5330
 Trp Ile Lys Tyr Cys Leu Thr Leu Met Gln Asn Ala Gln Leu Ser Met
 1 5 10 15
 Gln Asp Asn Ile Gly Glu Leu Asp Leu Asp Lys Gln Ser Glu Leu Arg
 20 25 30
 Ala Leu Arg Lys Lys Glu Leu Asp Glu Glu Glu Ser Ile Arg Lys Lys
 35 40 45
 Ala Val Gln Phe Gly Thr Gly Glu Leu Cys Asp Ala Ile Ser Ala Val
 50 55 60
 Glu Glu Lys Val Ser Tyr Leu Arg Pro Leu Asp Phe Glu Glu Ala Arg
 65 70 75 80
 Glu Leu Phe Leu Leu Gly Gln His Tyr Val Phe Glu Ala Lys Glu Phe
 85 90 95
 Phe Gln Ile Asp Gly Tyr Val Thr Asp His Ile Glu Val Val Gln Asp
 100 105 110
 His Ser Ala Leu Phe Lys Val Leu Ala Phe Phe Glu Thr Asp Met Glu
 115 120 125
 Arg Arg Cys Lys Met His Lys Arg Arg Ile Ala Met Leu Glu Pro Leu
 130 135 140
 Thr Val Asp Leu Asn Pro Gln Tyr Tyr Leu Leu Val Asn Arg Gln Ile
 145 150 155 160
 Gln Phe Glu Ile Ala His Ala Tyr Tyr Asp Met Met Asp Leu Lys Val
 165 170 175
 Ala Ile Ala Asp Arg Leu Arg Asp Pro Asp Ser His Ile Val Lys Lys
 180 185 190
 Ile Asn Asn Leu Asn Lys Ser Ala Leu Lys Tyr Tyr Gln Leu Phe Leu
 195 200 205
 Asp Ser Leu Arg Asp Pro Asn Lys Val Phe Pro Glu His Ile Gly Glu
 210 215 220
 Asp Val Leu Arg Pro Ala Met Leu Ala Lys Phe Arg Val Ala Arg Leu
 225 230 235 240
 Tyr Gly Lys Ile Ile Thr Ala Asp Pro Lys Lys Glu Leu Glu Asn Leu
 245 250 255
 Ala Thr Ser Leu Glu His Tyr Lys Phe Ile Val Asp Tyr Cys Glu Lys

gaagcactat ataatcagta tatgaaagag gttgggagtc ctcctcttga tcctactgag
660
cgttttcttc ctgaagaaga gaaacttact gaacaagaga gatcaaaaag atttgaaaag
720
gtttatactc ataacctata ttacctagct caagtctacc agcatctgga aatgtttgag
780
aaggctgctc actattgcca tagtacacta aaacgccagc ttgagcacia tgcctaccat
840
cctatagagt gggctatcaa tgctgctacc ttgtcacagt ttacatcaa taagctatgc
900
tttatggagg ccaggcactg tttatcagct gctaattgtca tttttggtca aactggaaa
960
atctcagcca cagaagacac tcctgaagct gaaggagaag tgccagagct ttatcatcaa
1020
agaaaggggg aaatagcaag gtgctggatc aaatactgtt tgactctcat gcagaatgcc
1080
caactctcca tgcaggacaa cataggagag cttgatcttg ataaacagtc tgaacttaga
1140
gctttaagga aaaaagaact agatgaggag gaaagcattc ggaaaaaagc tgtgcagttt
1200
ggaaccggtg aactgtgtga tgccatctct gcagtagaag agaaagtga ctacttgaga
1260
cctttagatt ttgaagaagc cagagaactt ttcttattgg gtcagcacta tgtctttgag
1320
gcaaaagagt tctttcagat tgatgggttat gtcactgacc atattgaagt tgtccaagac
1380
cacagtgtct tgtttaaggt gcttgcatc tttgaaactg acatggagag acggtgcaag
1440
atgcataaac gcagaatagc catgctagag cccctaactg tagacctgaa tccacagtat
1500
tatctgttgg tcaacagaca gatccagttt gaaattgcac atgcttacta tgatatgatg
1560
gatttgaagg ttgccattgc tgacaggcta agggaccccg actcacacat tgtaaaaaaa
1620
ataaataatc ttaataagtc ggcactcaag tactaccagc tcttcctaga ctccctgaga
1680
gacccaaaca aagtctttcc tgagcacatc ggggaagacg tcctccgccc ggccatgtta
1740
gctaaattcc gggtagctcg tctgtatggc aaaatcatta ctgcagatcc caagaaagag
1800
ctggaaaatt tggcaacatc attggaacat tacaaattta ttgttgatta ctgtgaaaag
1860
catcctgagg ccgcccagga aatagaagtt gagctagaac ttagtaaaga gatggttagt
1920
cttctcccaa caaaaatgga gagattcaga accaagatgg ccctgactta atccttgttt
1980
ttaaagaaag gaaatgtgca atattgaagt gatctttttc cctagtcaga caggcccaat
2040
tccattgtga tgtttacctt tatagccagg tgagtgcagt ttgaacttga gatacagtca
2100
actgagtgtt tgctaggatc ctaaggaaca taaagttaat taaaaactta cacctaatta
2160
tgtaaattgc cttgttaaag acatgtgatt tgtatttttag atgcttgttt cctattaaaa
2220

485 490 495
 Asp Asp Ser Tyr Thr Cys Glu Cys Pro Arg Gly Phe His Gly Lys His
 500 505 510
 Cys Glu Lys Ala Arg Pro His Leu Cys Ser Ser Gly Pro Cys Arg Asn
 515 520 525
 Gly Gly Thr Cys Lys Glu Ala Gly Gly Glu Tyr His Cys Ser Cys Pro
 530 535 540
 Tyr Arg Phe Thr Gly Arg His Cys Glu Ile Gly Lys Pro Asp Ser Cys
 545 550 555 560
 Ala Ser Gly Pro Cys His Asn Gly Gly Thr Cys Phe His Tyr Ile Gly
 565 570 575
 Lys Tyr Lys Cys Asp Cys Pro Pro Gly Phe Ser Gly Arg His Cys Glu
 580 585 590
 Ile Ala Pro Ser Pro Cys Phe Arg Ser Pro Cys Val Asn Gly Gly Thr
 595 600 605
 Cys Glu Asp Arg Asp Thr Asp Phe Phe Cys His Cys Gln Ala Gly Tyr
 610 615 620
 Met Gly Arg Arg Cys Gln Ala Glu Val Asp Cys Gly Pro Pro Glu Glu
 625 630 635 640
 Val Lys His Ala Thr Leu Arg Phe Asn Gly Thr Arg Leu Gly Ala Val
 645 650 655
 Ala Leu Tyr Ala Cys Asp Arg Gly Tyr Ser Leu Ser Ala Pro Ser Arg
 660 665 670
 Ile Arg Val Cys Gln Pro His Gly Val Trp Ser Glu Pro Pro Gln Cys
 675 680 685
 Leu Gly Asp Ser Val Gly
 690

<210> 5329

<211> 2582

<212> DNA

<213> Homo sapiens

<400> 5329

nngggccgca acgtgtcgag agccgtaagt aaagtgtcgc aaagcagaag gaaggcggga
 60
 gtcccgaactg caaacattga ggaaagccag gcagtagagg ccgctatggc gaacgttccg
 120
 tgggcagagg tctgcgagaa attccaggcg gcgctcgctc tgtcgcggtt ggaactgcat
 180
 aaaaatccgg agaaggaacc atacaagtcc aaatacagcg ccggggcgct actggaagag
 240
 gtcaaggcgc tgctcgcccc tgcgcctgag gacgaggatg agcggcctga ggccgaggac
 300
 ggccccgggtg ccggtgacca cgccctgggg ctgcgggctg aggtggtgga gcccgagggg
 360
 cccgtcgccc agcgagcggg gaggctggca gtcacagagt tccacctcgg ggtgaaccac
 420
 atcgacacgg aggagctgtc ggcgggggag gagcacctgg tgaaatgcct gcggctgctg
 480
 cgcaggtacc ggctctcgca cgactgcac tctctctgca tccaggcgca gaataacctg
 540
 ggtatcttgt ggtctgaaag agaagaaatt gaaactgcac aggttacct agagtcatca
 600

50	55	60
Ala Thr Glu Asp Val Arg His Tyr Phe Pro Glu Leu Leu Asp Phe Asn		
65	70	75
Ala Thr Trp Val Phe Val Ala Thr Trp Tyr Arg Val Thr Phe Phe Gly		80
	85	90
Gly Ser Ser Ser Ser Pro Val Asn Thr Phe Gln Thr Val Leu Ile Thr		95
	100	105
Asp Gly Lys Leu Ser Phe Thr Ile Phe Asn Tyr Glu Ser Ile Val Trp		110
	115	120
Thr Thr Gly Thr His Ala Ser Ser Gly Gly Asn Ala Thr Gly Leu Gly		125
	130	135
Gly Ile Ala Ala Gln Ala Gly Phe Asn Ala Gly Asp Gly Gln Arg Tyr		140
145	150	155
Phe Ser Ile Pro Gly Ser Arg Thr Ala Asp Met Ala Glu Val Glu Thr		160
	165	170
Thr Thr Asn Val Gly Val Pro Gly Arg Trp Ala Phe Arg Ile Asp Asp		175
	180	185
Ala Gln Val Arg Val Gly Gly Cys Gly His Thr Thr Ser Val Cys Leu		190
	195	200
Ala Leu Arg Pro Cys Leu Asn Gly Gly Lys Cys Ile Asp Asp Cys Val		205
	210	215
Thr Gly Asn Pro Ser Tyr Thr Cys Ser Cys Leu Ser Gly Phe Thr Gly		220
225	230	235
Arg Arg Cys His Leu Asp Val Asn Glu Cys Ala Ser Gln Pro Cys Gln		240
	245	250
Asn Gly Gly Thr Cys Thr His Gly Ile Asn Ser Phe Arg Cys Gln Cys		255
	260	265
Pro Ala Gly Phe Gly Gly Pro Thr Cys Glu Thr Ala Gln Ser Pro Cys		270
	275	280
Asp Thr Lys Glu Cys Gln His Gly Gly Gln Cys Gln Val Glu Asn Gly		285
	290	295
Ser Ala Val Cys Val Cys Gln Ala Gly Tyr Thr Gly Ala Ala Cys Glu		300
305	310	315
Met Asp Val Asp Asp Cys Ser Pro Asp Pro Cys Leu Asn Gly Gly Ser		320
	325	330
Cys Val Asp Leu Val Gly Asn Tyr Thr Cys Leu Cys Ala Glu Pro Phe		335
	340	345
Lys Gly Leu Arg Cys Glu Thr Gly Asp His Pro Val Pro His Ala Cys		350
	355	360
Leu Ser Ala Pro Cys His Asn Gly Gly Thr Cys Val Asp Ala Asp Gln		365
	370	375
Gly Tyr Val Cys Glu Cys Pro Glu Gly Phe Met Gly Leu Asp Cys Arg		380
385	390	395
Glu Arg Val Xaa Pro Met Thr Val Ser Ala Ala Thr Glu Ala Asp Ala		400
	405	410
Trp Ala Pro Thr Pro Pro Ser Ala His Ala Pro Cys Gly Xaa Ser Leu		415
	420	425
Gly Phe Ser Val Asn Leu Lys Ser Gln Pro Xaa Pro Cys Asn Met Asn		430
	435	440
Thr Gln Cys Pro Asp Gly Gly Tyr Cys Met Glu His Gly Gly Ser Tyr		445
	450	455
Leu Cys Val Cys His Thr Asp His Asn Ala Ser His Ser Leu Pro Ser		460
465	470	475
Pro Cys Asp Ser Asp Pro Cys Phe Asn Gly Gly Ser Cys Asp Ala His		480

gtggagaacg gctctgcggt gtgtgtgtgc caggccggat acaccggagc agcctgcgag
 960
 atggatgtgg acgactgcag ccctgacccc tgcctgaatg gaggtctctg tgttgaccta
 1020
 gtggggaatt acacctgctt gtgtgccgag cccttcaagg gacttcgctg tgagacagga
 1080
 gaccatccag tgccacacgc ctgcctctcg gccccttgcc acaatggggg cacctgtgtg
 1140
 gatgcggacc agggctacgt gtgcgagtgc cccgaaggct tcatgggcct ggactgcagg
 1200
 gagagagtcn nccccgatgac tgtgagtgcc gcaacggagg cagatgcctg ggcgccaaca
 1260
 ccaccctctg cccatgcccc ctgcggnant tctttgggct tctctgtgaa tttgaaatca
 1320
 cagccantgc cctgcaacat gaacacacag tgcccagatg ggggctactg catggagcac
 1380
 ggcgggagct acctctgcgt ctgccacacc gaccacaatg ccagccactc cctgccatca
 1440
 ccctgcgact cggacccctg cttcaacgga ggctcctgcg atgcccata gaactcctac
 1500
 acctgcgagt gcccgcgcgg gttccacggc aagcactgcg agaaagcccg gccacacctg
 1560
 tgcagctcag ggccctgccg gaacgggggc acgtgcaagg aggcgggcgg cgagtaccac
 1620
 tgcagctgcc cctaccgctt cactgggagg cactgtgaga tcgggaagcc agactcgtgt
 1680
 gcctctggcc cctgtcaciaa cggcggcacc tgcttccact acattggcaa atacaagtgt
 1740
 gactgtcccc caggcttctc cggcggcac tgcgagatag cccctcccc ctgcttcggg
 1800
 agcccggtg tgaatggggg cacctgcgag gaccgggaca cggatttctt ctgccactgc
 1860
 caagcagggt acatgggacg ccgatgccag gcagaggtgg actgcggccc cccggaggag
 1920
 gtgaagcag ccacactgcg cttcaacggc acgcggctgg gcgcggtggc cctgtatgca
 1980
 tgtgaccgtg gctacagcct gagcgcccc agcgcacatcc gggctctgcca gccacacggt
 2040
 gtctggagtg agcctcccca gtgccttggt gattctgtgg gccc
 2084

<210> 5328

<211> 694

<212> PRT

<213> Homo sapiens

<400> 5328

Glu	His	Ser	Gly	Leu	Tyr	Val	Asn	Asn	Asn	Gly	Ile	Ile	Ser	Phe	Leu
1				5					10					15	
Lys	Glu	Val	Ser	Gln	Phe	Thr	Pro	Val	Ala	Phe	Pro	Ile	Ala	Lys	Asp
			20					25					30		
Arg	Cys	Val	Val	Ala	Ala	Phe	Trp	Ala	Asp	Val	Asp	Asn	Arg	Arg	Ala
		35					40				45				
Gly	Asp	Val	Tyr	Tyr	Arg	Glu	Ala	Thr	Asp	Pro	Ala	Met	Leu	Arg	Arg

	100		105		110
Arg Gly Leu Asp Gly Arg Val Leu Tyr Trp Pro Arg Gly Arg Val Trp					
	115		120		125
Gly Gly Ser Ser Ser Leu Asn Ala Met Val Tyr Val Arg Gly His Ala					
	130		135		140
Glu Asp Tyr Glu Arg Trp Gln Arg Gln Gly Ala Arg Gly Trp Asp Tyr					
145		150		155	160
Ala His Cys Leu Pro Tyr Phe Arg Lys Ala Gln Gly His Xaa Ala Gly					
	165		170		175
Arg Gln Pro Val Pro Gly Arg Asp Gly Pro Leu Arg Val Ser Arg Gly					
	180		185		190
Lys Thr Asn His Pro Leu His Cys Ala Phe Leu Glu Ala Thr Gln Gln					
	195		200		205
Ala Gly Tyr Pro Leu Thr Glu Asp Met Asn Gly Phe Gln Gln Glu Gly					
	210		215		220
Phe Gly Trp Met Asp Met Thr Ile His Glu					
225		230			

<210> 5327

<211> 2084

<212> DNA

<213> Homo sapiens

<400> 5327

gagcactccg gactctacgt gaacaacaac gggatcatct ccttcctgaa ggaggtttct
60
cagttcaccc cagtggcctt cccattgcc aaggaccgct gcgtggtggc agccttctgg
120
gcagatgtgg acaaccggcg tgcaggcgac gtgtactacc gggaggccac cgacccagcc
180
atgctgcgcc gageccacgga ggacgtcagg cactacttcc ccgagctcct ggacttcaat
240
gccacctggg tttttgttgc cacctggtac cgagtgcctt tctttggagg cagttcctca
300
tcccctgtca acacattcca gactgtgctc atcacagacg gcaagctctc cttcaccatc
360
ttcaactatg agtccatcgt gtggaccaca ggcacacacg ccagcagcgg gggcaacgcc
420
actggcctcg ggggcatcgc agcccaggct ggcttcaacg caggcgatgg gcagcggttac
480
ttcagtatcc ccggctcgcg cacagcagac atggccgagg tggagaccac caccaacgtg
540
ggtgtgcccg ggcgctgggc gttcagaatc gatgatgcc aggtgcgcgt ggggggctgc
600
ggccatacaa cgtccgtgtg cctggccctg cgcccctgcc tcaacggcgg caagtgcac
660
gacgactcgc tcacgggcaa cccctcctac acctgctcct gcctctcggg cttcacgggg
720
cggaggtgcc acctggacgt gaacgaatgt gcctcccagc cctgtcagaa tgggtgggacc
780
tgtactcacg gcatcaacag tttccgctgc cagtgcccggt ctggcttttg gggaccacc
840
tgtgagacag cccaatcccc ctgtgacacc aaagagtgtc aacatggtgg ccagtgccag
900

<400> 5325
 gccggcgccg ccggttaaag tgccgcgggg caggggcccgg gccgcggcca cccgtcctc
 60
 ccgctccggg cccgactgtc gggctctcgg ccgagtcgcc ccggacaatc acaaagagt
 120
 tgtaggccag ccccggtcac agagtgcacc gtatcctgtc acttctggat gtgagggaga
 180
 agtgagtcac ctcattcccc tccgtggatc agaggacttg gactagatag aagcatgtg
 240
 tgtctcctac gaggcctggg ccggcctgga gccctggcac ggggagccct ggggcagcag
 300
 caatccctgg gtgcccgggc cctggccagc gcaggctctg agagccggga cgagtacagc
 360
 tatgtggtgg tgggcgcggg ctggcgggg tgcgtgctgg ctgggaggct cacggaggac
 420
 cccgccgagc gcgtgctgct gctggaggcc gggcccaagg acgtgcgcgc ggggagcaag
 480
 cggctctcgt ggaagatcca catgcccgcg gccctggtgg ccaacctgtg cgacgacagg
 540
 tacaactggt gctaccacac agaggtgcag cggggcctgg acggccgcgt gctgtactgg
 600
 ccacgcggcc gcgtctgggg tggctcctca tccctcaatg ccatggtcta cgtccgtggg
 660
 cacgccgagg actacgagcg ctggcagcgc cagggcgccc gcggctggga ctacgcgcac
 720
 tgcttgcct acttccgcaa ggcgcagggc cacngagctg ggccgcagcc ggtaccgggg
 780
 cgcatgggcc cgctgcgggt gtccccggggc aagaccaacc acccgctgca ctgcgcattc
 840
 ctggaggcca cgcagcaggc cggtacccg ctcaccgagg acatgaatgg cttccagcag
 900
 gagggcttcg gctggatgga catgaccatc catgaagg
 938

<210> 5326

<211> 234

<212> PRT

<213> Homo sapiens

<400> 5326

Met	Trp	Cys	Leu	Leu	Arg	Gly	Leu	Gly	Arg	Pro	Gly	Ala	Leu	Ala	Arg
1			5					10					15		
Gly	Ala	Leu	Gly	Gln	Gln	Gln	Ser	Leu	Gly	Ala	Arg	Ala	Leu	Ala	Ser
		20					25						30		
Ala	Gly	Ser	Glu	Ser	Arg	Asp	Glu	Tyr	Ser	Tyr	Val	Val	Val	Gly	Ala
		35				40					45				
Gly	Ser	Ala	Gly	Cys	Val	Leu	Ala	Gly	Arg	Leu	Thr	Glu	Asp	Pro	Ala
		50			55						60				
Glu	Arg	Val	Leu	Leu	Leu	Glu	Ala	Gly	Pro	Lys	Asp	Val	Arg	Ala	Gly
65				70					75					80	
Ser	Lys	Arg	Leu	Ser	Trp	Lys	Ile	His	Met	Pro	Ala	Ala	Leu	Val	Ala
			85					90						95	
Asn	Leu	Cys	Asp	Asp	Arg	Tyr	Asn	Trp	Cys	Tyr	His	Thr	Glu	Val	Gln

180 185 190
 Gln Tyr Lys Ala Pro Thr Glu Asn His His Asn Arg Pro Tyr Tyr Ala
 195 200 205
 Lys

<210> 5323
 <211> 475
 <212> DNA
 <213> Homo sapiens

<400> 5323
 gcgcgcccag ggtctggcag acacgaaaca gccaggagct gtggcaacat aactgcatgc
 60
 tgactggccc gcctcagtga tgccaggccc actgacagca gcagagagcg agggggcagtc
 120
 catagtgcc aggcctttct gcccacacca cgccacttat atggcctcct gccatgggca
 180
 gagtagggag gtgaggtgct cgtggtgccc agagtcctca tcaaggagtg aaaccagagt
 240
 gtggccatag ccagtaagaa cagcacgctg cagcccagcc catcagcctc aggcactgag
 300
 ctctctgcac actccatgaa tgcagagcag catcaggctg gcctcagccc ctccccgtct
 360
 taggccagcc ccaaggggtgc tgtggttctc cgggatgcc aagctcccc aagctgtggc
 420
 tgtgcctggc tgggaccttt cccctcctg ctcaggaag tttccaccc ccggg
 475

<210> 5324
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 5324
 Met Glu Cys Ala Glu Ser Ser Val Pro Glu Ala Asp Gly Leu Gly Cys
 1 5 10 15
 Ser Val Leu Phe Leu Leu Ala Met Ala Thr Leu Trp Phe His Ser Leu
 20 25 30
 Met Arg Thr Leu Gly Thr Thr Ser Thr Ser Pro Pro Tyr Ser Ala His
 35 40 45
 Gly Arg Arg Pro Tyr Lys Trp Arg Gly Val Gly Arg Lys Ala Trp Gln
 50 55 60
 Leu Trp Thr Ala Pro Arg Ser Leu Leu Leu Ser Val Gly Leu Ala Ser
 65 70 75 80
 Leu Arg Arg Ala Ser Gln His Ala Val Met Leu Pro Gln Leu Leu Ala
 85 90 95
 Val Ser Cys Leu Pro Asp Pro Gly Arg
 100 105

<210> 5325
 <211> 938
 <212> DNA
 <213> Homo sapiens

aaaaggggaag gttaatggca taaatatggt cgcactaatg gaagacaaat ggcaaattctt
 5700
 gaaatagaat tggggcaatt accttttgat cctcaatact gattcacaat tgagttaaatt
 5760
 tagacaactg taagagaaaa atttatgctt tgtataatgt ttggtattga aactaatgaa
 5820
 attaccaaga tgacaatgtc ttttcctttg tttctaagta tcagtttgat aactttatat
 5880
 tattcctcag aagcattagt taaaagtcta ctaacctgca ttttcctgta gtttagcttc
 5940
 gttgaatttt ttttgacact ggaaatgttc aactgtagtt ttattaagga agccaggcat
 6000
 gcaacagatt ttgtgcatga aatgagactt cctttcagtg taagagctta aagcaagctc
 6060
 agtcatacat gacaaagtgt aattaacact gatgtttgtg ttaaatttgc agcagagctt
 6120
 gagaaaagta cattgttctg gaatttcac cattaacattt tataatctta cactcacttc
 6180
 ttgtcttttt gtgggttcaa gagccctctg acttgtgaag aatttgctgc cctcttaaga
 6240
 gcttgctgac ttgttttctt gtgaaatttt ttgcacatct gaatatcgtg gaagaaacaa
 6300
 taaaactaca ccatgaggaa aact
 6324

<210> 5322

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5322

Met	Leu	Lys	Arg	Glu	Leu	Glu	Arg	Glu	Arg	Leu	Val	Thr	Thr	Ala	Leu
1				5				10						15	
Arg	Gly	Glu	Leu	Gln	Gln	Leu	Ser	Gly	Ser	Gln	Leu	His	Gly	Lys	Ser
			20					25					30		
Asp	Ser	Pro	Asn	Val	Tyr	Thr	Glu	Lys	Lys	Glu	Ile	Ala	Ile	Leu	Arg
		35					40					45			
Glu	Arg	Leu	Thr	Glu	Leu	Glu	Arg	Lys	Leu	Thr	Phe	Glu	Gln	Gln	Arg
	50					55					60				
Ser	Asp	Leu	Trp	Glu	Arg	Leu	Tyr	Val	Glu	Ala	Lys	Asp	Gln	Asn	Gly
65				70					75					80	
Lys	Gln	Gly	Thr	Asp	Gly	Lys	Lys	Lys	Gly	Gly	Arg	Gly	Ser	His	Arg
			85					90					95		
Ala	Lys	Asn	Lys	Ser	Lys	Glu	Thr	Phe	Leu	Gly	Ser	Val	Lys	Glu	Thr
		100						105					110		
Phe	Asp	Ala	Met	Lys	Asn	Ser	Thr	Lys	Glu	Phe	Val	Arg	His	His	Lys
	115					120					125				
Glu	Lys	Ile	Lys	Gln	Ala	Lys	Glu	Ala	Val	Lys	Glu	Asn	Leu	Lys	Lys
	130					135					140				
Phe	Ser	Asp	Ser	Val	Lys	Ser	Thr	Phe	Arg	His	Phe	Lys	Asp	Thr	Thr
145				150					155					160	
Lys	Asn	Ile	Phe	Asp	Glu	Lys	Gly	Asn	Lys	Arg	Phe	Gly	Ala	Thr	Lys
			165					170						175	
Glu	Ala	Ala	Glu	Lys	Pro	Arg	Thr	Val	Phe	Ser	Asp	Tyr	Leu	His	Pro

tgggatggag cagaactgca ttatttcatt acattactca gaacaggcat ataattgaaa
4080
acttatgaat tattttttttt ttaattattt gagatggaat cttgctttgt cagccaggct
4140
ggagtgcagt gacacgatct cagctcactg caacctctgt ctctggggtt cagggtgattc
4200
tcctccctag tctcccaagt agctgggact atagggcacg tgccaccaca cccggcta
4260
tttcatattt ttagtagaga tggggtttca ccatgttggc caggctgttc ttgaaatcct
4320
gacctcaagt gatccacaca tgtctacctc ccaaagtgtc gggattacag tcgtgagcca
4380
ctgtaccccg cctaaaactg atgaattatt tctgaaattt tctatttaac attttcagac
4440
cacagttgac cacaggtaac ggaaacctca atcacagaaa gtaaagccgt ggatacgggtg
4500
ggactaatgt attggttagca gcctagagga ttgatgggaa aggtatgaag ctagaagggtg
4560
gtcaatataa tacagacatg agctgatgaa catctaaact gggactatac tagtaggaga
4620
ggaaaggaaa aaacatttgg aaaatagtaa cattgatatt tcttgtgaag gagaagtaga
4680
aagtaacagt gacttctaga tttctgggtt gggcatctg ttgttggata gtagtaccac
4740
tgagataggg aattcaaggt ttggggcaag ggtaattgga gatgagaatt gtgtttggag
4800
gtaactactg acattcaagt ggagagggtt agttggcagt tagttctatg gtcactctct
4860
ttgccgagac tgtatattta tcagactcct gggagaacac caacatccat ggggttgtag
4920
ggaaggctaa ggacaagagt ggggagtggc accttgaaaa tccaaaagcc atctcaagta
4980
aaaggataa atgtgtcatg ctttttaaaa agttgatgtg cggaaaatgt tttcttggct
5040
tggaaactgg gcggccaggg gatgacagta tggacttcca gtgaagtagt gacggaagcc
5100
tgatcataga cattaaggaa agcgggtgtag gtgttgtgag cttttgctgt aagaaaaagt
5160
tgagactttt gttttgcttt gtttgtgaga gatgtgtatg tatttctgct gagtgataaa
5220
gccagcgggg agggactgat ttttatagga aaggaggaaa aataatggaa acacatctca
5280
ttattttatt gtcacatttc ttttcttgtt tatcttttga gtgtttccct tttttgccag
5340
tagagttatt gtctattttt tctttctata ggacaaaaaa actaatacag actcctttat
5400
ttttatatgg atatactagg attgtaattc agatatttaa tatcttttat cagtgttcag
5460
atcatagatt aatggagaaa acatttaaaa ttgttttaaa tttaaataca ttgaactcta
5520
acatagatga aaaatgtgtt tactgctttc agtcgacctg ataaaaagca acgtatggta
5580
aatattgaaa actccaggca tcgaaaacaa gagcagaagc accttcagcc acagccttat
5640

tccctccat atggaccag gtcgggttac ataaaaccgt gtcattacag tagtttgtaa
2460
catttgtaga ttggatagca tttttatgat ttgatgagtt tcttgtaagg ttaccgtttc
2520
taagagtgtg gctttatggc cactgagaga attcagaata aattgaaaga tggagtctaa
2580
aaattattag ctgttacaaa tggaacattt cattataacg tgatcacttt gacttgagca
2640
aatggtttaa tttttatctt aaaaatcagt taagaatata taaaatccta ctttggccaa
2700
gtttgtttct tttcattata gtttatatga aaagatcacc ttaagtgaat ttattttcct
2760
ttaatctttt atgtatttat tcaacttttg aagctaggaa tgagcaacac aaattttact
2820
ctgaagtcag aagagtcct atataataat tctaattgtc cacctatttt cacttgcca
2880
ttccatgtac cagcttagtt atgatactta gtcacataat tatctttgat aaaggtagag
2940
gcacaaagag gcaaactaag caagtcaaat tctaattgtg gtacttcata ataatttttt
3000
atccattttc atctttatat tctgtaacat gaaacttacc taatcttcaa atgttagctt
3060
cattttttac ctttgaaata cttaattctt ctgaataaat ataattgtgc tataaaataa
3120
tgagactgat tctgggtgtc ttagttatta agctggatc tagtcctata atgaacaaag
3180
gtgaagctgc cttgaggaga caagtgaata atttttgctt caaaggagct cacaagctaa
3240
gtaaaataat gaaattaagg tatggggcat ggtggcctca ggctgtctgg aggtgtttgg
3300
aaaggcttct tgagtgaggt ggcctttgaa ctgaacttag tttttaaaagt agcttttgga
3360
agagaaatga ggatttgcta tgcagacagg gaagggaatt tcaactaaaa ggaaggctat
3420
ttggagatgt gaagatacac tgctttaagg aagcagggtg gagctggagg ataagagatg
3480
cagaccatga agggcccat tttatgctaa aggttttgc ctgtaggaca tggagaactt
3540
ctgaagaatt ttcaaggcgg gtgggataag attatattgt atttttagatt acagtagtcc
3600
ccccttatct tcaggatata tgttccaaga cccccagtgg atgctggaaa ccagggatag
3660
aacataattc tatatatact atgcatgaat ttctttttcc ttctttacaa tctcacacat
3720
aggtttgttc ttactataga tcttaccat ctctcatact tttattttctc ttgagaacct
3780
tcacctttc acttaaagga ggcgctttat agcttctctt tggcatatcc aaatgccago
3840
atcactgttg tattttgggg tcattattaa gttacttaat catccttaat ccttatctta
3900
gggatacttg aacacaaaca ctgtggtagg ataacagtat atctgattaa cagactgcta
3960
ctaggtgatt aatgggtggg tagtgtaaata acacaagaaa aggatgattc acatcccatg
4020

caagaaactg aaccttctaa ggagttgagt aaacgtcagt tcagtagtgg tctcaataag
840
tgtgttatac ttgctttggt gattgcaatc agcatgggat ttggccattt ctatggcaca
900
attcagattc agaagcgtca acagttagtc agaaagatac atgaagatga attgaatgat
960
atgaaggatt atctttccca gtgtcaacag gaacaagaat cttttataga ttataagtca
1020
ttgaaagaaa atcttgcaag gtgttggaac cttactgaag cagagaagat gtcctttgaa
1080
actcagaaaa cgaaccttgc tacagaaaat cagtatttaa gagtatccct ggagaaggaa
1140
gaaaaagcct tatcctcatt acaggaagag ttaaacaac taagagaaca gattagaata
1200
ttggaagata aagggaacag tactgaatta gttaaagaaa atcagaaact taagcagcat
1260
ttggaagagg aaaagcagaa aaaacacagc tttcttagtc aaaggagac tctgttgaca
1320
gaagcaaaga tgctaaagag agaactggag agagaacgac tagtaactac ggctttaagg
1380
ggggaactcc agcagttaag tggtagtcag ttacatggca agtcagattc tcccaatgta
1440
tatactgaaa aaaaggaaat agcaatctta cgggaaagac tcaactgagct ggaacggaag
1500
ctaacttcg aacagcagcg ttctgatttg tgggaaagat tgtatgttga ggcaaaagat
1560
caaatggaa aacaaggaac agatggaaaa aagaaagggg gcagaggaag ccacagggct
1620
aaaaataagt caaaggaaac atttttgggt tcagttaagg aaacatttga tgccatgaag
1680
aattctacca aggagtttgt aaggcatcat aaagagaaaa ttaagcaggc taaagaagct
1740
gtgaaggaaa atctgaaaaa attctcagat tcagttaaatt ccactttcag acactttaaa
1800
gataccacca agaatatctt tgatgaaaag ggtaataaaa gatttgggtgc taaaaagaa
1860
gcagctgaaa aaccaagaac agtttttagt gactatttac atccacagta taaggcacct
1920
acagaaaacc atcataatag gccctactat gcaaaatgat ggaaggaaga aaagccagtt
1980
cactttaaag aattcagaaa aaatacaaat tcaaagaaat gcagtcctgg gcatgattgt
2040
agagaaaatt ctcatctttt cagaaaggct tgttctggtg tatttgattg tgctcaacaa
2100
gagtccatga gcctttttta cacagtgggtg aatcctataa ggatggatga atttagacag
2160
ataattcaaa ggtacatggt aaaagaactg gatacttttt gtcaactggaa cgaacttgat
2220
cagttcatca ataagttttt cctaaacggg gtcttttatac atgatcagaa gctcttcact
2280
gactttgtta atgatgttaa agattatctt agaaacatga aggaatatga agtagataat
2340
gatggagtat ttgagaagtt ggatgaatat atatatagac acttcttttg tcacactttt
2400

agaatctggt gctctctggt gagagagatc t
4231

<210> 5320
<211> 96
<212> PRT
<213> Homo sapiens

<400> 5320
Met Cys Arg Val Thr Pro Leu Ala Leu Gly Val Ser Thr Glu Pro Ser
1 5 10 15
Pro Ala Ser Leu Val Leu Asn Phe Val Leu Phe Cys Phe Val Leu Arg
20 25 30
Arg Ser Leu Ala Leu Xaa Thr Gln Ala Gly Val Leu Trp Leu Asp Leu
35 40 45
Gly Ser Leu Gln Pro Pro Pro Pro Arg Phe Lys Gln Phe Ser Cys Pro
50 55 60
Ser Leu Pro Ser Ser Trp Asp Tyr Arg Cys Met Pro Pro Trp Leu Ala
65 70 75 80
Asn Phe Cys Ile Phe Ser Arg Asp Gly Val Ser Pro Tyr Trp Ser Gly
85 90 95

<210> 5321
<211> 6324
<212> DNA
<213> Homo sapiens

<400> 5321
ntccggaggc ccgagccgac cctggggcgt ccgggtccggt ggtcttacag cctccaaacc
60
ccgagtgcta taccgaactg cgcgccaagg gtgggagagc tgacggcctg ggccaccctt
120
cttccttcac tgggcaggct ttgagggtgt gtgcgggtctg gactgatgaa aatccatag
180
acctgaaaga tgtctgaaaa ttccagtgc acgtgattcat cttgtgggtg gactgtcatc
240
agtcatgagg ggtcagatat agaaatgttg aattctgtga cccccactga cagctgtgag
300
cccgccccag aatgttcacc tttagagcaa gaggagcttc aagcattgca gatagagcga
360
ggagaaagca gccaaaatgg cacagtgtt atggaagaaa ctgcttatcc agctttggag
420
gaaaccagct caacaattga ggcagaggaa caaaagatac ccgaagacag tatctatatt
480
ggaactgcca gtgatgattc tgatattgtt acccttgagc cacctaagtt agaagaaatt
540
ggaaatcaag aagttgtcat tgttgaagaa gcacagagtt cagaagactt taacatgggc
600
tcttctcta gcagccagta tactttctgt cagccagaaa ctgtattttc atctcagcct
660
agtgatgatg aatcaagtag tgatgaaacc agtaatcagc ccagtcctgc ctttagacga
720
cgccgtgcta ggaagaagac cgtttctgct tcagaatctg aagaccgggt agttgctgaa
780

ggggcagtgg cttccccggc agcagcccca tgatggctga atccgaaatc ctogatgggt
2640
ccagcttgat gtctttgcag ctgcacctat gggaagaagt agtcctctct tccttctctc
2700
cttcagcttt ttaaaaacag tcctcagagg atccatgatc cccagcactg tcccatcctc
2760
cacaaaggcc cacaggcatg cctgtactct ctttcattaa ggtcttgaag tcaggctgcc
2820
ccctccccag cccccagttc tctccccacc ccctcacccc acccggggct cactcagcct
2880
ggcagaggaa gaaggaaggc agacatctcc gcagccactc ctgggccttt tatgtgccga
2940
gttaccctac ttgccttggg cgtgtccact gagccttccc cagccagtct tgttctcaat
3000
tttgttttgt tttgttttgt tttgagacgg agtcttgctc tgntcaccca ggctggagt
3060
ctatggctcg atcttgctc actgcaacct ccacctcca ggttcaagca attctcttgc
3120
cccagcctcc cgagtagctg ggattacagg tgcatgccac catggctggc taatttttgt
3180
atttttagta gagatggggt ttcaccatat tggtcaggct gatctggaac tcctgacctc
3240
aggtgatcca cctgcctcag cctcccaaag tgctgggatt acaggcgtga gcaatcgtgc
3300
ccagccttgt tcttaatttt gtatcatcca gtcacgcta atattacacg caccttctca
3360
cttaatctc acgacaagcc tgtgaggcag atgtcattg tcccatctt gatgaaactt
3420
gagtctcagg gaagtgaagt gacttgccca gggtcactca ggtagagtg agattcaaac
3480
ccacatgtgg ctccaaagtc tgcactctga tttgggggtg ttttttggca tggcacctc
3540
acctctctcc ctgcctgttt tccccaaagt ggaaaggaag gcctttcaaa ccagagtgtc
3600
tcactccct ctgacctcca gaccagatgg ggcagagcc agccagctca gccaggctcc
3660
ctgtgtcctg ggaggaagtg tccccatccc ccatgcccct tatggggagg gagggcgtct
3720
gatgtctct ctctgcctcc cccccatct gtcaggcaca ggtgacgggg gcagcccatg
3780
cgagcccttc tcctgctgct ctgggagggc cagttccaca ttgagccagc ctgggtccat
3840
ggaaaatgat ggectgggct ttctgaggcc ttatctgatg cctctgcagt tcatgtcccc
3900
caccaggcct cgaggctcag ggtgggagag ggccccgggc tgccctgtca ctctctaac
3960
acttccctcc cctgtcccca acatgccctg taataaaatt agagaagact aactagagt
4020
gttctaagtg cttttctttt gagtggcatg ttgctcagct ccgtccttcc atgggggtggc
4080
tcctcttggg ggcagagttg agctggaatg ctttcaggta ctatcttacc tatcgaaggc
4140
ttgagtgact tgcccaaat aagttttacg atagaacaag tggtaggact tactgttttg
4200

ctgggaggag gctgcccggc gcctggaggt ggccatgtac cccttcaaga aggtctccta
1020
cttgccgttc actgaggcct tcgaccgagc caaggctgag aacaagctgg tgcactcaat
1080
cctgctgtgg ggggccctgg atgaccagtc ctgctgaggt tcagggcgga ctctccggga
1140
gactgtcctg gaaagttcgc ccctcctcac cctgctcaac gagagcttca tcagcacctg
1200
gtccctgggtg aaggagctgg aggaactgca gaacaaacag gagaactcgt cccaccagaa
1260
gctggctggc ctgcacctgg agaagtacag cttccccgtg gagatgatga tctgcctgcc
1320
caatggcacc gtggtccatc acatcaatgc caactacttc ttggacatca cctccgtgaa
1380
gcccaggaa atcgagagca atctcttcag cttctcatcc acctttgaag acccgtccac
1440
ggccacctac atgcagttcc tgaaggaggg actccggcgt ggccctgccc tctccagcc
1500
ctagagtgcc tggacgggat ctgatgcaca ggccccacg cctcagagcc agagtggctc
1560
tcagcccatt tcagactgca gatgccgccc actcccaccc cactcctagg ctgccttggg
1620
gggtacaaga tccactgagg gtggccacca cagccttggc tccatggtgg cgggtagaca
1680
agggatgcct gggctgactg ggcagaggaa cctctagctc tgactgtcac tcggctctcc
1740
ctaccattt ggctctggaa gctgcttggc cccccagat cagggcctgg gtgaactccc
1800
tggaccttc ctagccagcc gcacagtcta ggcccttgtg ggggtgaagaa tggagggagg
1860
agcaggctag gaagacgggg ccaccacct ctccttgett tcagccctc ccacaggaaa
1920
catcaagaag cccagccag gaggggcccag gctgccaagg cggctcccct gtttatctag
1980
agccttcgtt cctggccata ccccgactg ccctcctgtg cctgatgtcc ccagctgggg
2040
tcagtctcaa caggagccag tcttctggag cctctgggca gaacctcca tcagagtggg
2100
aatcagacgg gacccccctg agcttccttg accacgccac tgaccagcta tctggggaag
2160
tttactgtga aggggtttct gccttttagca atgggggttca ctaagggggg tcccagggcc
2220
cagggccaag gcactccac cgcctacett agcacagggt ctctgcagga ctgcgggagc
2280
cagcgtcct gccgcccctc ttgcccctca gaccttgcac ccacagaagc acaaccagc
2340
caaacaccac agccttctcc agagccggca ctgtcccggc aaccaggggt gccccaggct
2400
agetcttcta cctctggggc accacggact ccccttggcc actcttggga ctttgggtcca
2460
cgtcctgagc cactgaccac ggccagtctc tctttttata tgtgcagaaa agtgttttta
2520
caciaacttt ctcattggtt gtaggtattt ttttataacc ccagtgtgta ggagaaagga
2580

```

<400> 5319
nncggccgcg cggcaggaac tggcgctgaa gaccctgggg acagatggcc tttttctctt
60
ttcctccttg gacactgacg gggatatgta catcagccct gaggagttca aacccattgc
120
tgagaagcta acaggggtcaa ctcccgcggc cagctacgag gaggaggagt tgccccctga
180
ccctagcgag gagacgctca ccatagaagc ccgattccag cctctgctcc cggagaccat
240
gaccaagagc aaagatggct tcctaggggt ctccgcctc gccctgtccg gcctccgaaa
300
ctggacagcc gccgcctcac caagtgcagt gtttgccacc cgccacttcc agcccttctt
360
tccccgcca ggccaggagc tgggtgagcc ctggtggatc atccccagtg agctgagcat
420
gttactggc tacctgtcca acaaccgctt ctatccaccg ccgcccagg gcaaggaggt
480
catcatccac cggctcctga gcatgttcca ccctcggcc tttgtgaaga cccgctttgc
540
ccctcaggga gctgtggcct gcctgactgc catcagcgac ttctactaca ctgtgatgtt
600
cggatccat gccgagttcc agctcagtga gccgccgac tccccctttt ggttctcccc
660
tgctcagttc accggccaca tcatcctctc caaagacgcc acccacgtcc gcgacttccg
720
gctcttcgtg cccaaccaca ggtctctgaa tgtggacatg gagtggcttt acggggccag
780
tgaaagcagc aacatggagg tggacatcgg ctacataccc cagatggagc tggaggccac
840
gggccccctc gtgccctccg tgatcctgga tgaggatggc agcatgatcg acagccacct
900
gccctcaggg gagcccctgc agtttgtgtt tgaggagatc aagtggcagc aggagctgag
960

```

```
<210> 5317
<211> 889
<212> DNA
<213> Homo sapiens
```

```
<210> 5318
<211> 132
<212> PRT
<213> Homo sapiens
```

4487

50					55					60					
Arg 65	Leu	Gln	Phe	Lys	Val 70	Val	Asp	Leu	Glu	Gln 75	Thr	Asn	Leu	Asp	Glu 80
Asp	Gly	Ala	Ser	Ala 85	Leu	Phe	Asp	Met	Ile 90	Glu	Tyr	Tyr	Glu	Ser	Ala 95
Thr	His	Leu	Asn 100	Ile	Ser	Phe	Asn	Lys 105	His	Ile	Gly	Thr	Arg 110	Gly	Trp
Gln	Ala	Ala 115	Ala	His	Met	Met	Arg	Lys 120	Thr	Ser	Cys	Leu	Gln 125	Tyr	Leu
Asp	Ala 130	Arg	Asn	Thr	Pro	Leu 135	Leu	Asp	His	Ser	Ala 140	Pro	Phe	Val	Ala
Arg 145	Ala	Leu	Arg	Ile	Arg	Ser 150	Ser	Leu	Ala	Val 155	Leu	His	Leu	Glu	Asn 160
Ala	Ser	Leu	Ser	Gly 165	Arg	Pro	Leu	Met	Leu	Leu 170	Ala	Thr	Ala	Leu	Lys 175
Met	Asn	Met	Asn 180	Leu	Arg	Glu	Leu	Tyr	Leu	Ala 185	Asp	Asn	Lys	Leu	Asn 190
Gly	Leu	Gln	Asp 195	Ser	Ala	Gln	Leu	Gly	Asn	Leu 200	Leu	Lys	Phe	Asn	Cys
Ser	Leu 210	Gln	Ile	Leu	Asp	Leu 215	Arg	Asn	Asn	His	Val 220	Leu	Asp	Ser	Gly
Leu 225	Ala	Tyr	Ile	Cys	Glu	Gly 230	Leu	Lys	Glu	Gln 235	Arg	Lys	Gly	Leu	Val 240
Thr	Leu	Val	Leu 245	Trp	Asn	Asn	Gln	Leu	Thr	His 250	Thr	Gly	Met	Ala	Phe 255
Leu	Gly	Met	Thr 260	Leu	Ser	His	Thr	Gln	Ser	Leu 265	Glu	Thr	Leu	Asn	Leu 270
Gly	His	Asn	Pro 275	Ile	Gly	Asn	Glu	Gly	Val	Arg 280	His	Leu	Lys	Asn	Gly 285
Leu	Ile 290	Ser	Asn	Arg	Ser	Val 295	Leu	Arg	Leu	Gly	Leu 300	Ala	Ser	Thr	Lys
Leu 305	Thr	Cys	Glu	Gly	Ala	Val 310	Ala	Val	Ala	Glu 315	Phe	Ile	Ala	Glu	Ser 320
Pro	Arg	Leu	Leu 325	Arg	Leu	Asp	Leu	Arg	Glu	Asn 330	Glu	Ile	Lys	Thr	Gly 335
Gly	Leu	Met	Ala 340	Leu	Ser	Leu	Ala	Leu	Lys	Val 345	Asn	His	Ser	Leu	Leu 350
Arg	Leu	Asp	Leu 355	Asp	Arg	Glu	Pro	Lys	Lys	Glu 360	Ala	Val	Lys	Ser	Phe 365
Ile	Glu	Thr	Gln 370	Lys	Ala	Leu 375	Leu	Ala	Glu	Ile 380	Gln	Asn	Gly	Cys	Lys
Arg 385	Asn	Leu	Val	Leu	Ala	Arg 390	Glu	Arg	Glu	Glu 395	Lys	Glu	Gln	Pro	Pro 400
Gln	Leu	Ser	Ala 405	Ser	Met	Pro	Glu	Thr	Thr	Ala 410	Thr	Glu	Pro	Gln	Pro 415
Asp	Asp	Glu	Pro 420	Ala	Ala	Gly	Val	Gln	Asn	Gly 425	Ala	Pro	Ser	Pro	Ala 430
Pro	Ser	Pro	Asp 435	Ser	Asp	Ser	Asp	Ser	Asp	Ser 440	Asp	Gly	Glu	Glu	Glu 445
Glu	Glu	Glu	Glu 450	Gly	Glu	Arg	Asp	Glu	Thr	Pro 455	Ser	Gly	Ala	Ile	Asp 460
Thr	Arg	Asp	Thr 465	Gly	Ser	Ser	Glu	Pro	Gln	Pro 470	Pro	Pro	Glu	Pro	Pro 475
Arg	Ser	Gly	Pro 480	Pro	Leu	Pro	Asn	Gly	Leu	Lys 485	Pro	Glu	Phe	Ala	Leu 490

acactgtcgc acactcagag cctggagacg ctgaacctgg gccacaaccc catcgggaac
 1200
 gaggtgtgc ggcacctcaa gaacgggctc atcagcaacc gcagcgtgct ggcctcggg
 1260
 ctggcctcca ccaagctcac gtgcgagggc gcggtggcgg tggcggagtt catcgtgag
 1320
 agccccgcc tcctgagact ggaccttcgg gagaacgaga tcaagacagg cgggctcatg
 1380
 gcactgtcgt tggcctcaa ggtgaaccac tcaactgtgc gcctggacct cgacctgaa
 1440
 cccaagaaag aggcggtgaa gagcttcac gagacgcaga aggcgctgct ggccgagatc
 1500
 cagaacggct gcaagcgcaa cttggtgctg gcgcgggaga gggaggagaa ggagcagccg
 1560
 ccacagctgt cggcctccat gcctgagacc accgccaccg agccccagcc cgacgacgag
 1620
 cccgccgctg ggggtgcagaa cggggccccc agccccgcac ccagcccga ctcagactca
 1680
 gactcggact cggatgggga ggaagaggag gaagaggaag gggagaggga cgagaccccc
 1740
 tccggggcca ttgacaccg ggacacaggg tcctctgagc ctcagpcacc accggagccg
 1800
 cctcggctcag ggccaccact gcccaacggc ctgaagcccg agttcgccct ggcactgccc
 1860
 cctgagccgc ccccggggccc tgaggtcaag gggggcagct gcggcctgga gcacgaactg
 1920
 agctgtcca agaacgagaa ggagctcgag gagctgcttc tggaagccag tcaggaatcc
 1980
 gggcaggaga cactgtgaca ctttaggtga ggccaggccc ggggcccaca gcactcggga
 2040
 ggagctgaga gagcctctgg ctctgacagt ctctccccc atctctctc cccaagttcc
 2100
 ctttttccgg tcggtctgag atgagctgag gccagagcca tgagaatctg ctcaccttc
 2160
 cccagcctt cctgaggccc aggatgccag ggggtgggggc cattctgggg cccccctcc
 2220
 cccacagcaa cactacaagg ggtgcaggag ctacaggag tggccctccg cgcgtgactc
 2280
 aagcacttct atttatga
 2298

<210> 5316

<211> 544

<212> PRT

<213> Homo sapiens

<400> 5316

Gln	Asn	Val	Thr	Val	Asp	Glu	Val	Ile	Gly	Ala	Tyr	Lys	Gln	Ala	Cys
									10					15	
1				5											
Gln	Lys	Leu	Asn	Cys	Arg	Gln	Ile	Pro	Lys	Leu	Leu	Arg	Gln	Leu	Gln
			20					25					30		
Glu	Phe	Thr	Asp	Leu	Gly	His	Arg	Leu	Asp	Cys	Leu	Asp	Leu	Lys	Gly
			35				40				45				
Glu	Lys	Leu	Asp	Tyr	Lys	Thr	Cys	Glu	Ala	Leu	Glu	Glu	Val	Phe	Lys


```

      1           5           10           15
Cys Thr Gly Ser Leu His Phe Val His Gln Ala Tyr Leu Gln Gln Trp
      20           25           30
Ile Lys Ser Ser Asp Thr Arg Cys Cys Glu Leu Cys Lys Tyr Glu Phe
      35           40           45
Ile Met Glu Thr Lys Leu Lys Pro Leu Arg Lys Trp Glu Lys Leu Gln
      50           55           60
Met Thr Ser Ser Glu Arg Arg Lys Ile Met Cys Ser Val Thr Phe His
      65           70           75           80
Val Ile Ala Ile Thr Cys Val Val Trp Ser Leu Tyr Val Leu Ile Asp
      85           90           95
Arg Pro Ala Glu Ile Lys Gln Gly Gln Ala Thr Gly Ile Leu Glu
      100          105          110
Trp Pro Phe Trp Thr Lys Leu Val Val Val Ala Ile Gly Phe Thr Arg
      115          120          125
Gly Leu Leu Phe Met Tyr Val Gln Cys Lys Val Tyr Val Gln Leu Trp
      130          135          140
Lys Arg Leu Lys Ala Tyr Asn Arg Val Ile Tyr Val Gln Asn Cys Pro
      145          150          155          160
Glu Thr Ser Lys Lys Asn Ile Phe Glu Lys Ser Pro Leu Thr Glu Pro
      165          170          175
Asn Phe Glu Asn Lys His Gly Tyr Gly Ile Cys His Ser Asp
      180          185          190

```

<210> 5313
 <211> 322
 <212> DNA
 <213> Homo sapiens

```

<400> 5313
cggggcccgc gagaggaaga ggggtgacaag cgcagcggtg cccccagac tcgggtcctg
60
aaaggcgctca tgcgagtagg catcctggcg aaaggcctcc tcctgcgtgg ggacaggaac
120
gtgcgcctcg ctctgctctg ctccgagaag cccacgcaca gcctgctgcg gaggatcgcc
180
cagcagctgc cccggcaaca caggcaattc cacgttgtgt gcgactggcc tgtgcatatg
240
gaggtgttca gtgacctggc cctggacact cctgctaaca ggacacacac atactctctt
300
acacacatac atgtccacac ac
322

```

<210> 5314
 <211> 107
 <212> PRT
 <213> Homo sapiens

```

<400> 5314
Arg Gly Arg Arg Glu Glu Gly Asp Lys Arg Ser Val Ala Pro Gln
      1           5           10           15
Thr Arg Val Leu Lys Gly Val Met Arg Val Gly Ile Leu Ala Lys Gly
      20           25           30
Leu Leu Leu Arg Gly Asp Arg Asn Val Arg Leu Ala Leu Leu Cys Ser

```

210	215	220
Val Asp Gly Gln Leu Thr Ser Pro Ala Thr Pro Ser Pro Asp Ala Ser		
225	230	235
Thr Ser Leu Glu Asp Ser Phe Ala His Leu Gln Leu Ser Gly Asp Asn		240
	245	250
Thr Ala Glu Arg Ser His Arg Gly Glu Gly Glu Glu Asp His Glu Ser		255
	260	265
Pro Ser Ser Gly Arg Val Pro Ala Pro Asp Thr Ser Ile Glu Glu Thr		270
	275	280
Glu Ser Asp Ala Ser Ser Asp Ser Glu Asp Val Ser Ala Val Val Ala		285
	290	295
Gln His Ser Leu Thr Gln Gln Arg Leu Leu Val Ser Asn Ala Asn Gln		300
305	310	315
Thr Val Pro Asp Arg Ser Asp Arg Ser Gly Thr Asp Arg Ser Val Ala		320
	325	330
Gly Gly Gly Thr Val Ser Val Ser Val Arg Ser Arg Arg Pro Asp Gly		335
	340	345
Gln Cys Thr Val Thr Glu Val		350
355		

<210> 5311
 <211> 572
 <212> DNA
 <213> Homo sapiens

<400> 5311
 tgccactgtg aaggagatga tgagagcccc ctgatcaccc cctgccactg cacaggaagc
 60
 ctccacttcg tgcaccaggc ctacctgcag cagtggatca agagctccga cacgcgctgc
 120
 tgcgagctct gcaagtatga gttcatcatg gagaccaagc tgaagccact gagaaaatgg
 180
 gagaagttgc agatgacgtc cagcgagcgc aggaagatca tgtgctcagt gacattccac
 240
 gtcattgccca tcacatgtgt ggtctggtcc ttgtatgtgc tcattgaccg tcttgctgag
 300
 gagatcaagc aggggcaggc aacaggaatc ctagaatggc ccttttggac taaattggtg
 360
 gttgtggcca tcggcttcac cagaggactt ctttttatgt atgttcagt taaagtgtat
 420
 gtgcaattgt ggaagagact caaggcctat aatagagtga tctatgttca aaactgtcca
 480
 gaaacaagca aaaagaatat ttttgaaaaa tctccactaa cagagcccaa ctttgaaaat
 540
 aaacatggat atggaatctg tcattccgac ac
 572

<210> 5312
 <211> 190
 <212> PRT
 <213> Homo sapiens

<400> 5312
 Cys His Cys Glu Gly Asp Asp Glu Ser Pro Leu Ile Thr Pro Cys His

gaaggataga ctcataatta aaatgtctaa catgtctctg ttgagaaatt tatttaattgt
 1560
 aaggaacttg ggtgttaata gttgagagct gtttagtaat aaccagttt tcttgaggct
 1620
 tgtttacttt atacttttta aaaacttctg tagttctttt ggccagtgtg tttgtattat
 1680
 ctgtgcatta atggctctca tctgactcct gcattgtgtc ttatttttct gcatggattg
 1740
 gcataagacc attactaaaa tttggcacct gtgagatggt tgatattatg aacaggaaac
 1800
 ataatttaat gtatgaatag atgtgaattt gggatttcaa aatagatgaa taacaactat
 1860
 tttatagtaa agttattgaa atggaaatga aaacagccag taacttatgt ttcagaatgt
 1920
 ttgtaacaca cttcatgggtg ttcccatagg ctttctgtgc tagtcttata gtttgagggt
 1980
 tttttggtct gcatttttct ttttgattac aaaatttata atttaataaa tactagagtt
 2040
 tatcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
 2078

<210> 5310

<211> 359

<212> PRT

<213> Homo sapiens

<400> 5310

Met	Met	Ala	Gly	Cys	Gly	Glu	Ile	Asp	His	Ser	Ile	Asn	Met	Leu	Pro
1				5					10					15	
Thr	Asn	Arg	Lys	Ala	Asn	Glu	Ser	Cys	Ser	Asn	Thr	Ala	Pro	Ser	Leu
			20					25					30		
Thr	Val	Pro	Glu	Cys	Ala	Ile	Cys	Leu	Gln	Thr	Cys	Val	His	Pro	Val
		35					40					45			
Ser	Leu	Pro	Cys	Lys	His	Val	Phe	Cys	Tyr	Leu	Cys	Val	Lys	Gly	Ala
	50					55				60					
Ser	Trp	Leu	Gly	Lys	Arg	Cys	Ala	Leu	Cys	Arg	Gln	Glu	Ile	Pro	Glu
65					70					75				80	
Asp	Phe	Leu	Asp	Lys	Pro	Thr	Leu	Leu	Ser	Pro	Glu	Glu	Leu	Lys	Ala
			85						90					95	
Ala	Ser	Arg	Gly	Asn	Gly	Glu	Tyr	Ala	Trp	Tyr	Tyr	Glu	Gly	Arg	Asn
			100					105					110		
Gly	Trp	Trp	Gln	Tyr	Asp	Glu	Arg	Thr	Ser	Arg	Glu	Leu	Glu	Asp	Ala
		115					120					125			
Phe	Ser	Lys	Gly	Lys	Lys	Asn	Thr	Glu	Met	Leu	Ile	Ala	Gly	Phe	Leu
		130				135					140				
Tyr	Val	Ala	Asp	Leu	Glu	Asn	Met	Val	Gln	Tyr	Arg	Arg	Asn	Glu	His
145					150					155				160	
Gly	Arg	Arg	Arg	Lys	Ile	Lys	Arg	Asp	Ile	Ile	Asp	Ile	Pro	Lys	Lys
				165					170					175	
Gly	Val	Ala	Gly	Leu	Arg	Leu	Asp	Cys	Asp	Ala	Asn	Thr	Val	Asn	Leu
		180					185						190		
Ala	Arg	Glu	Ser	Ser	Ala	Asp	Gly	Ala	Asp	Ser	Val	Ser	Ala	Gln	Ser
		195					200					205			
Gly	Ala	Ser	Val	Gln	Pro	Leu	Val	Ser	Ser	Val	Arg	Pro	Leu	Thr	Ser

<212> DNA

<213> Homo sapiens

<400> 5309

nncgcagctg tggccggaga ggtgggagtc ggagcgaggc cctctcgggg gagcaggggtg
60
aacgccggcc actctaggat cctcactcgg ggagaggagg catagctcgc ggggtcaccc
120
tccacccgca acgtactccg ggtcggcctt gcgctcgggg cctgagaggg gcggcggcgg
180
ggtcaggggc cgcacaaaga atgaaccagc agtggagag aaaatactgt aagctggctg
240
actgctgggtg aagaaaatgc tttatTTTTg tggcaggcat ctgtgggatc tgtaatagaa
300
atgatggctg gctgtgggtg aattgatcat tcaataaaca tgcttcctac aaacaggaaa
360
gcgaacgagt cctgttctaa tactgcacct tctttaaccg tcctgaatg tgccatttgt
420
ctgcaaacat gtgttcatcc agtcagtctg ccctgtaagc acgttttctg ctatctatgt
480
gtaaaaggag cttcatggct tggaaagcgg tgtgctcttt gtcgacaaga aattcccag
540
gatttccttg acaagccaac cttgttgtca ccagaagaac tcaaggcagc aagtagagga
600
aatggtgaat atgcatggta ttatgaagga agaatgggt ggtggcagta cgatgagcgc
660
actagtagag agctggaaga tgctttttcc aaaggtaaaa agaactga aatgttaatt
720
gctggctttc tgtatgtcgc tgatcttgaa aacatggttc aatataggag aaatgaacat
780
ggacgtcgca ggaagattaa gcgagatata atagatatat caaagaaggg agtagctgga
840
cttaggctag actgtgatgc taataccgta aacctagcaa gagagagctc tgctgacgga
900
gcggacagtg tatcagcaca gagtggagct tctgttcagc ccctagtgtc ttctgtaagg
960
cccctaacat cagtagatgg tcagttaaca agccctgcaa caccatcccc tgatgcaagc
1020
acttctctgg aagactcttt tgctcattta caactcagtg gagacaacac agctgaaagg
1080
agtcataagg gagaaggaga agaagatcat gaatcaccat cttcaggcag ggtaccagca
1140
ccagacacct ccattgaaga aactgaatca gatgccagta gtgatagtga ggatgtatct
1200
gcagttgttg cacagcactc cttgacccaa cagagacttt tggtttctaa tgcaaaccag
1260
acagtacccg atcgatcaga tcgatcggga actgatcgat cagtagcagg gggtggaaca
1320
gtgagtgtca gtgtcagatc tagaaggcct gatggacagt gcacagtaac tgaagtttaa
1380
ataaaaatgt cttcagctcc atgctcaagg ttgaaaggt tacctgtaaa tttctgcccc
1440
cataacatta tactcatccc tagtagtgca ttttgggagt tggggtgga aggggtatgg
1500

taagcgaatt ggaaatgctg agcttccata agtcagctga gttttaaagg taaacgttat
 720
 ggctgaagta gtaaagcacc tgaccacaaa acctcttgta aaaacagccc tgagtaggta
 780
 ttccagggc tccacaaagt tgcttatggg aatcctgagc tgcttttcac catctcaaga
 840
 agcctaagaa gttatatatt taatcaggta gacaaaacag ttcaaagcat aagggtccatg
 900
 gtgggtgaaa atggatgcaa gtgattctaa gtttgtggat ttgtggatag cagagggatc
 960
 gggacctctt ggaggaaccc tgggtaccaa gctcccaggc ccttcctcta tcatggatgc
 1020
 tgggtgactt tgggaagtca ccacctcttc ccaagcctgt ttcccatatc acagatgtgg
 1080
 ggccatggcc tcgatgatgg tctccacagg tctttccacc tctgtgagtc caagtcaggt
 1140
 caatcagcaa ggacctatct ctgccctggg tcagctcctc agaaccaacc cccagcatct
 1200
 ctaaagcaaa agcctcacct caagggctgc tcagaagaga gcaccttcag catgagttgt
 1260
 tgctggaaga tctaataagc tgtgtttcct gggaagtggg gctttactta gccctgtgga
 1320
 caacttctct atgcatctgt gtgagcagat gatcattgta ttacctttta tcggtagtaa
 1380
 gcttgaaaaa ataatttaag aatacaatgg agaaatgtaa ataagtatct atgtaaattt
 1440
 gtttaaaata aactgaatgt atttaatggg ccatttatat gttcttttat gtaacatgta
 1500
 gtttaataaa gttcctgttt atgagagtca tgtttcatct cagcttcttc c
 1551

<210> 5308

<211> 112

<212> PRT

<213> Homo sapiens

<400> 5308

Met	Leu	Gly	Val	Gly	Ser	Glu	Glu	Leu	Thr	Gln	Gly	Arg	Asp	Gly	Ser
1				5					10					15	
Leu	Leu	Ile	Asp	Leu	Thr	Trp	Thr	His	Arg	Gly	Gly	Lys	Thr	Cys	Gly
			20					25					30		
Asp	His	His	Arg	Gly	His	Gly	Pro	Thr	Ser	Val	Ile	Trp	Glu	Thr	Gly
		35					40					45			
Leu	Gly	Arg	Gly	Gly	Asp	Phe	Pro	Lys	Ser	Pro	Ser	Ile	His	Asp	Arg
	50					55					60				
Gly	Arg	Ala	Trp	Glu	Leu	Gly	Thr	Gln	Gly	Ser	Ser	Lys	Arg	Ser	Arg
65					70				75					80	
Ser	Leu	Cys	Tyr	Pro	Gln	Ile	His	Lys	Leu	Arg	Ile	Thr	Cys	Ile	His
				85				90						95	
Phe	Pro	Pro	Pro	Trp	Thr	Leu	Cys	Phe	Glu	Leu	Phe	Cys	Leu	Pro	Asp
				100				105						110	

<210> 5309

<211> 2078

cggggtcttt gttctcggct cccacagcag agccagggtga gggggggcct gccaggacta
 360
 gacagaagtg gggcggcctg aaccctgctt ccagccatgg ccaggggcca cggaaccg
 420
 caggggtgtc tgaagccgcc ctgtcagctg gccgggtccaa gcctgtggct ggagctgg
 480
 tgtgtttatc taataaagtc ccacagggtgc ctcaaaaaaa aaaaaaaaaa aaaaaaaaaa
 540
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 582

<210> 5306

<211> 62

<212> PRT

<213> Homo sapiens

<400> 5306

Met	Ala	Arg	Gly	His	Gly	Thr	Arg	Gln	Gly	Cys	Leu	Lys	Pro	Pro	Cys
1				5					10					15	
Gln	Leu	Ala	Gly	Pro	Ser	Leu	Trp	Leu	Glu	Leu	Val	Cys	Val	Tyr	Leu
			20					25					30		
Ile	Lys	Ser	His	Arg	Cys	Leu	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
			35				40					45			
Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
			50				55					60			

<210> 5307

<211> 1551

<212> DNA

<213> Homo sapiens

<400> 5307

cagggtgtt tgacagtgtg cgtctttcca atcccatgtt cctccattcg tgtgtctgtt
 60
 ataaaactga gtgaaggctg ctatgacctg tgttcactct ggttacaggg aggtgcaaac
 120
 cattctgtct cccagccttt cttctctctt tgtgtgtctc cagcacttcc ttcttttcta
 180
 acatggcctg gagagagtct ctctctcctt gtctctgtct cttaataata gtttttaacg
 240
 tggacatctc ttccttggtg cagtgggttt taaatactga gaagaaccaa gtcagggttt
 300
 ttaaagcaga ctaaaagcat gaaattgctt tcagaagaat gtatatcatc gggaaaagtt
 360
 cgggggcaga gtgggggaat caggctttat tcaaaagaaa cagttgaaaa catgggactt
 420
 tttctaccca atgcccattt cagcactcct ctgagactaa ttgggaaacg gggaaattct
 480
 tggaattttt tttttaagaa acttttttgt gtttttttta attttaggtc acttattagt
 540
 gaaacctcat tttagatctg acattggtag atagatggat ttaggcaaat atgatgcggt
 600
 tgtggggaat ccacgtgggt gacgttagaa cctcccttct gcagactgtt gcctgtcatc
 660

<210> 5303
 <211> 334
 <212> DNA
 <213> Homo sapiens

<400> 5303
 cgtacgcacg ccactgacag ccgcccagca gaagtacaag aagggcgatg tggctctgcac
 60
 acccagcgga atacgaaaga agttcaacgg caagccgggg cgcccggctg ggctcacgag
 120
 atggctgcat gaaggagtca cagcggcgag gctactgctc acgccacctg tccatgcgaa
 180
 ccaaagagat ggaaggcctg gcagacagtg ggcctggcgg ggcggggccgg cccgcggccg
 240
 tggcagcccg tgagggcagc acggagtttg actgggggtga tgagacgtcg agggacagtg
 300
 gaggccagca gtgtggcgac tcgtggagac tcac
 334

<210> 5304
 <211> 95
 <212> PRT
 <213> Homo sapiens

<400> 5304
 Met Trp Ser Ala His Pro Ala Glu Tyr Glu Arg Ser Ser Thr Ala Ser
 1 5 10 15
 Arg Gly Ala Arg Leu Gly Ser Arg Asp Gly Cys Met Lys Glu Ser Gln
 20 25 30
 Arg Arg Gly Tyr Cys Ser Arg His Leu Ser Met Arg Thr Lys Glu Met
 35 40 45
 Glu Gly Leu Ala Asp Ser Gly Pro Gly Gly Ala Gly Arg Pro Ala Ala
 50 55 60
 Val Ala Ala Arg Glu Gly Ser Thr Glu Phe Asp Trp Gly Asp Glu Thr
 65 70 75 80
 Ser Arg Asp Ser Gly Gly Gln Gln Cys Gly Asp Ser Trp Arg Leu
 85 90 95

<210> 5305
 <211> 582
 <212> DNA
 <213> Homo sapiens

<400> 5305
 nttgccggcc cctgcacatt taggatatgc tcctggatgg ggagtgggtt gtgcccaggg
 60
 cctctgtccc ccaggatgtc ttgtggtggc ggtcgccgt tctgcccccc agggcacccc
 120
 ctgtttagg cactggctag ggaggggag gcctccttcc tgcccctcga gacactcttg
 180
 ggagatgcat tttccgtctg gctcacaggg ggaggggtgag gctttgtacc ccagcccctg
 240
 cccaggccac tgtgaggggtg ggtgctggct gagcccctgg ggcagaagga gtggggcagg
 300

915 920 925
 Gln Leu Phe Val Gly Gly Ala Gly Gly Gln Gln Gly Phe Leu Gly Cys
 930 935 940
 Ile Arg Ser Leu Arg Met Asn Gly Val Thr Leu Asp Leu Glu Glu Arg
 945 950 955 960
 Ala Lys Val Thr Ser Gly Phe Ile Ser Gly Cys Ser Gly His Cys Thr
 965 970 975
 Ser Tyr Gly Thr Asn Cys Glu Asn Gly Gly Lys Cys Leu Glu Arg Tyr
 980 985 990
 His Gly Tyr Ser Cys Asp Cys Ser Asn Thr Ala Tyr Asp Gly Thr Phe
 995 1000 1005
 Cys Asn Lys Asp Val Gly Ala Phe Phe Glu Glu Gly Met Trp Leu Arg
 1010 1015 1020
 Tyr Asn Phe Gln Ala Pro Ala Thr Asn Ala Arg Asp Ser Ser Ser Arg
 1025 1030 1035 1040
 Val Asp Asn Ala Pro Asp Gln Gln Asn Ser His Pro Asp Leu Ala Gln
 1045 1050 1055
 Glu Glu Ile Arg Phe Ser Phe Ser Thr Thr Lys Ala Pro Cys Ile Leu
 1060 1065 1070
 Leu Tyr Ile Ser Ser Phe Thr Thr Asp Phe Leu Ala Val Leu Val Lys
 1075 1080 1085
 Pro Thr Gly Ser Leu Gln Ile Arg Tyr Asn Leu Gly Gly Thr Arg Glu
 1090 1095 1100
 Pro Tyr Asn Ile Asp Val Asp His Arg Asn Met Ala Asn Gly Gln Pro
 1105 1110 1115 1120
 His Ser Val Asn Ile Thr Arg His Glu Lys Thr Ile Phe Leu Lys Leu
 1125 1130 1135
 Asp His Tyr Pro Ser Val Ser Tyr His Leu Pro Ser Ser Ser Asp Thr
 1140 1145 1150
 Leu Phe Asn Ser Pro Lys Ser Leu Phe Leu Gly Lys Val Ile Glu Thr
 1155 1160 1165
 Gly Lys Ile Asp Gln Glu Ile His Lys Tyr Asn Thr Pro Gly Phe Thr
 1170 1175 1180
 Gly Cys Leu Ser Arg Val Gln Phe Asn Gln Ile Ala Pro Leu Lys Ala
 1185 1190 1195 1200
 Ala Leu Arg Gln Thr Asn Ala Ser Ala His Val His Ile Gln Gly Glu
 1205 1210 1215
 Leu Val Glu Ser Asn Cys Gly Ala Ser Pro Leu Thr Leu Ser Pro Met
 1220 1225 1230
 Ser Ser Ala Thr Asp Pro Trp His Leu Asp His Leu Asp Ser Ala Ser
 1235 1240 1245
 Ala Asp Phe Pro Tyr Asn Pro Gly Gln Gly Gln Ala Ile Arg Asn Gly
 1250 1255 1260
 Val Asn Arg Asn Ser Ala Ile Ile Gly Gly Val Ile Ala Val Val Ile
 1265 1270 1275 1280
 Phe Thr Ile Leu Cys Thr Leu Val Phe Leu Ile Arg Tyr Met Phe Arg
 1285 1290 1295
 His Lys Gly Thr Tyr His Thr Asn Glu Ala Lys Gly Ala Glu Ser Ala
 1300 1305 1310
 Glu Ser Ala Asp Ala Ala Ile Met Asn Asn Asp Pro Asn Phe Thr Glu
 1315 1320 1325
 Thr Ile Asp Glu Ser Lys Lys Glu Trp Leu Ile
 1330 1335

485 490 495
 Gln Val Lys Thr Gly Glu Lys Tyr Phe Phe Gly Gly Phe Leu Asn Gln
 500 505 510
 Met Asn Asn Ser Ser His Ser Val Leu Gln Pro Ser Phe Gln Gly Cys
 515 520 525
 Met Gln Leu Ile Gln Val Asp Asp Gln Leu Val Asn Leu Tyr Glu Val
 530 535 540
 Ala Gln Arg Lys Pro Gly Ser Phe Ala Asn Val Ser Ile Asp Met Cys
 545 550 555 560
 Ala Ile Ile Asp Arg Cys Val Pro Asn His Cys Glu His Gly Gly Lys
 565 570 575
 Cys Ser Gln Thr Trp Asp Ser Phe Lys Cys Thr Cys Asp Glu Thr Gly
 580 585 590
 Tyr Ser Gly Ala Thr Cys His Asn Ser Ile Tyr Glu Pro Ser Cys Glu
 595 600 605
 Ala Tyr Lys His Leu Gly Gln Thr Ser Asn Tyr Tyr Trp Ile Asp Pro
 610 615 620
 Asp Gly Ser Gly Pro Leu Gly Pro Leu Lys Val Tyr Cys Asn Met Thr
 625 630 635 640
 Glu Asp Lys Val Trp Thr Ile Val Ser His Asp Leu Gln Met Gln Thr
 645 650 655
 Pro Val Val Gly Tyr Asn Pro Glu Lys Tyr Ser Val Thr Gln Leu Val
 660 665 670
 Tyr Ser Ala Ser Met Asp Gln Ile Ser Ala Ile Thr Asp Ser Ala Glu
 675 680 685
 Tyr Cys Glu Gln Tyr Val Ser Tyr Phe Cys Lys Met Ser Arg Leu Leu
 690 695 700
 Asn Thr Pro Asp Gly Ser Pro Tyr Thr Trp Trp Val Gly Lys Ala Asn
 705 710 715 720
 Glu Lys His Tyr Tyr Trp Gly Gly Ser Gly Pro Gly Ile Gln Lys Cys
 725 730 735
 Ala Cys Gly Ile Glu Arg Asn Cys Thr Asp Pro Lys Tyr Tyr Cys Asn
 740 745 750
 Cys Asp Ala Asp Tyr Lys Gln Trp Arg Lys Asp Ala Gly Phe Leu Ser
 755 760 765
 Tyr Lys Asp His Leu Pro Val Ser Gln Val Val Val Gly Asp Thr Asp
 770 775 780
 Arg Gln Gly Ser Glu Ala Lys Leu Ser Val Gly Pro Leu Arg Cys Gln
 785 790 795 800
 Gly Asp Arg Asn Tyr Trp Asn Ala Ala Ser Phe Pro Asn Pro Ser Ser
 805 810 815
 Tyr Leu His Phe Ser Thr Phe Gln Gly Glu Thr Ser Ala Asp Ile Ser
 820 825 830
 Phe Tyr Phe Lys Thr Leu Thr Pro Trp Gly Val Phe Leu Glu Asn Met
 835 840 845
 Gly Lys Glu Asp Phe Ile Lys Leu Glu Leu Lys Ser Ala Thr Glu Val
 850 855 860
 Ser Phe Ser Phe Asp Val Gly Asn Gly Pro Val Glu Ile Val Val Arg
 865 870 875 880
 Ser Pro Thr Pro Leu Asn Asp Asp Gln Trp His Arg Val Thr Ala Glu
 885 890 895
 Arg Asn Val Lys Gln Ala Ser Leu Gln Val Asp Arg Leu Pro Gln Gln
 900 905 910
 Ile Arg Lys Ala Pro Thr Glu Gly His Thr Arg Leu Glu Leu Tyr Ser

50					55					60					
Ser 65	Tyr	Ser	Pro	Gly	Tyr 70	Ala	Lys	Ile	Asn	Lys 75	Arg	Gly	Gly	Ala	Gly 80
Gly	Trp	Ser	Pro	Ser 85	Asp	Ser	Asp	His	Tyr 90	Gln	Trp	Leu	Gln	Val	Asp 95
Phe	Gly	Asn	Arg	Lys 100	Gln	Ile	Ser	Ala	Ile 105	Ala	Thr	Gln	Gly	Arg	Tyr 110
Ser	Ser	Ser 115	Asp	Trp	Val	Thr	Gln	Tyr	Arg 120	Met	Leu	Tyr	Ser	Asp	Thr 125
Gly	Arg	Asn 130	Trp	Lys	Pro	Tyr	His	Gln	Asp 135	Gly	Asn	Ile	Trp	Ala	Phe 140
Pro 145	Gly	Asn	Ile	Asn	Ser	Asp	Gly	Val	Val 150	Arg	His	Glu	Leu	Gln	His 160
Pro	Ile	Ile	Ala	Arg	Tyr	Val	Arg	Ile	Val 165	Pro	Leu	Asp	Trp	Asn	Gly 175
Glu	Gly	Arg	Ile	Gly	Leu	Arg	Ile	Glu	Val 180	Tyr	Gly	Cys	Ser	Tyr	Trp 185
Ala	Asp	Val	Ile	Asn	Phe	Asp	Gly	His	Val 195	Val	Leu	Pro	Tyr	Arg	Phe 200
Arg	Asn	Lys	Lys	Met	Lys	Thr	Leu	Lys	Asp 210	Val	Ile	Ala	Leu	Asn	Phe 215
Lys 225	Thr	Ser	Glu	Ser	Glu	Gly	Val	Ile	Leu 230	His	Gly	Glu	Gly	Gln	Gln 235
Gly	Asp	Tyr	Ile	Thr	Leu	Glu	Leu	Lys	Lys 245	Ala	Lys	Leu	Val	Leu	Ser 250
Leu	Asn	Leu	Gly	Ser	Asn	Gln	Leu	Gly	Pro 260	Ile	Tyr	Gly	His	Thr	Ser 265
Val	Met	Thr	Gly	Ser	Leu	Leu	Asp	His	His 275	Trp	His	Ser	Val	Val	280
Ile	Glu	Arg	Gln	Gly	Arg	Ser	Ile	Asn	Leu 290	Thr	Leu	Asp	Arg	Ser	Met 295
Gln 305	His	Phe	Arg	Thr	Asn	Gly	Glu	Phe	Asp 310	Tyr	Leu	Asp	Leu	Asp	Tyr 315
Glu	Ile	Thr	Phe	Gly	Gly	Ile	Pro	Phe	Ser 325	Gly	Lys	Pro	Ser	Ser	Ser 330
Ser	Arg	Lys	Asn	Phe	Lys	Gly	Cys	Met	Glu 340	Ser	Ile	Asn	Tyr	Asn	Gly 345
Val	Asn	Ile	Thr	Asp	Leu	Ala	Arg	Lys	Lys 355	Leu	Glu	Pro	Ser	Asn	360
Val	Gly	Asn	Leu	Ser	Phe	Ser	Cys	Val	Glu 370	Pro	Tyr	Thr	Val	Pro	Val 375
Phe 385	Phe	Asn	Ala	Thr	Ser	Tyr	Leu	Glu	Val 390	Pro	Gly	Arg	Leu	Asn	Gln 395
Asp	Leu	Phe	Ser	Val	Ser	Phe	Gln	Phe	Arg 405	Thr	Trp	Asn	Pro	Asn	Gly 410
Leu	Leu	Val	Phe	Ser	His	Phe	Ala	Asp	Asn 420	Leu	Gly	Asn	Val	Glu	Ile 425
Asp	Leu	Thr	Glu	Ser	Lys	Val	Gly	Val	His 435	Ile	Asn	Ile	Thr	Gln	Thr 440
Lys	Met	Ser	Gln	Ile	Asp	Ile	Ser	Ser	Gly 450	Ser	Gly	Leu	Asn	Asp	Gly 455
Gln 465	Trp	His	Glu	Val	Arg	Phe	Leu	Ala	Lys 470	Glu	Asn	Phe	Ala	Ile	Leu 475
Thr	Ile	Asp	Gly	Asp	Glu	Ala	Ser	Ala	Val	Arg	Thr	Asn	Ser	Pro	Leu

tgccatattt taaatcaact actccacgtg tttttccatc caatcacact gctgtgattc
 5580
 agggatcttt cttctaaaac ggacacattt gaacctcagg ttcacacaa acctggtacc
 5640
 tgttgcttcc cagaggatgg agaagtgtag ttaatcacac ctcttagttt aatctgaaat
 5700
 cttgaccagc ttatttaaca aataaatacc tcattgatta tatttaaaag taatacactt
 5760
 cctgtaaaaca aatggggaca atgcatccaa aaaatctttt taaacagatt acacaaaaat
 5820
 tatttccaga aaggctacca tttatcatca ttatatttca agcctcttat acttaataag
 5880
 cactttctaa aaagtcttga gatcccacca ttctgaggaa ttcaatatga tcactttttc
 5940
 cttctttgcc tgggagaggt taagaggagg tttcgaaggt atagatgcta ttgttctgat
 6000
 ggcccggtg aataaaatgg aaattctagt ttgttagaat tatgcattct tttcaagat
 6060
 tctcagtgtg cctaacttat tggagcacat cagtttcttg ggtaatggaa aacattacct
 6120
 agagttgcca gtggcacatt acaccagtac agagcacatt ccaaaggaga cattggacca
 6180
 gttaattccc atacaagtca aggtaacaga acaaaaggga atcctgatgc ctttttacca
 6240
 ttgctggttg agctcaggca ctgtcatgga cacccttaat tttaaaaggt tttaatcatt
 6300
 cttctataaa atacatttaa aatggaaaaa tacttaatat cactaaatat cagaacaatg
 6360
 taacatttac aaatgacata ttgaaagcaa aggctgtttt atttagccaa gatgattacc
 6420
 attaggagtt actttatgta ttgttgaaag caaattttaa acatgatgtt ttagaagtgt
 6480
 ttctgatttt taaacctggt ttacaggtat tacttctgca cttaccaa atgcccagat
 6540
 ggaaatttat tatttcttgc aattcccggt atagctctgt tctttatgca ttgtctcaac
 6600
 actttccctt ttttcccaa atgagtagag aattaaagcc acccaaaaca gcttctgcta
 6660
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 6712

<210> 5302

<211> 1339

<212> PRT

<213> Homo sapiens

<400> 5302

Ala	Pro	Pro	Ala	Gly	Arg	Arg	Arg	Met	Gln	Ala	Ala	Pro	Arg	Ala	Gly
1				5				10						15	
Cys	Gly	Ala	Ala	Leu	Leu	Leu	Trp	Ile	Val	Ser	Ser	Cys	Leu	Cys	Arg
			20					25					30		
Ala	Trp	Thr	Ala	Pro	Ser	Thr	Ser	Gln	Lys	Cys	Asp	Glu	Pro	Leu	Val
		35					40				45				
Ser	Gly	Leu	Pro	His	Val	Ala	Phe	Ser	Ser	Ser	Ser	Ser	Ile	Ser	Gly

915	920	925
Gln Leu Phe Val Gly Gly Ala Gly Gly Gln Gln Gly Phe Leu Gly Cys		
930	935	940
Ile Arg Ser Leu Arg Met Asn Gly Val Thr Leu Asp Leu Glu Glu Arg		
945	950	955
Ala Lys Val Thr Ser Gly Phe Ile Ser Gly Cys Ser Gly His Cys Thr		
965	970	975
Ser Tyr Gly Thr Asn Cys Glu Asn Gly Gly Lys Cys Leu Glu Arg Tyr		
980	985	990
His Gly Tyr Ser Cys Asp Cys Ser Asn Thr Ala Tyr Asp Gly Thr Phe		
995	1000	1005
Cys Asn Lys Asp Val Gly Ala Phe Phe Glu Glu Gly Met Trp Leu Arg		
1010	1015	1020
Tyr Asn Phe Gln Ala Pro Ala Thr Asn Ala Arg Asp Ser Ser Ser Arg		
1025	1030	1035
Val Asp Asn Ala Pro Asp Gln Gln Asn Ser His Pro Asp Leu Ala Gln		
1045	1050	1055
Glu Glu Ile Arg Phe Ser Phe Ser Thr Thr Lys Ala Pro Cys Ile Leu		
1060	1065	1070
Leu Tyr Ile Ser Ser Phe Thr Thr Asp Phe Leu Ala Val Leu Val Lys		
1075	1080	1085
Pro Thr Gly Ser Leu Gln Ile Arg Tyr Asn Leu Gly Gly Thr Arg Glu		
1090	1095	1100
Pro Tyr Asn Ile Asp Val Asp His Arg Asn Met Ala Asn Gly Gln Pro		
1105	1110	1115
His Ser Val Asn Ile Thr Arg His Glu Lys Thr Ile Phe Leu Lys Leu		
1125	1130	1135
Asp His Tyr Pro Ser Val Ser Tyr His Leu Pro Ser Ser Ser Asp Thr		
1140	1145	1150
Leu Phe Asn Ser Pro Lys Ser Leu Phe Leu Gly Lys Val Ile Glu Thr		
1155	1160	1165
Gly Lys Ile Asp Gln Glu Ile His Lys Tyr Asn Thr Pro Gly Phe Thr		
1170	1175	1180
Gly Cys Leu Ser Arg Val Gln Phe Asn Gln Ile Ala Pro Leu Lys Ala		
1185	1190	1195
Ala Leu Arg Gln Thr Asn Ala Ser Ala His Val His Ile Gln Gly Glu		
1205	1210	1215
Leu Val Glu Ser Asn Cys Gly Ala Ser Pro Leu Thr Leu Ser Pro Met		
1220	1225	1230
Ser Ser Ala Thr Asp Pro Trp His Leu Asp His Leu Asp Ser Ala Ser		
1235	1240	1245
Ala Asp Phe Pro Tyr Asn Pro Gly Gln Gly Gln Ala Ile Arg Asn Gly		
1250	1255	1260
Val Asn Arg Asn Ser Ala Ile Ile Gly Gly Val Ile Ala Val Val Ile		
1265	1270	1275
Phe Thr Ile Leu Cys Thr Leu Val Phe Leu Ile Arg Tyr Met Phe Arg		
1285	1290	1295
His Lys Gly Thr Tyr His Thr Asn Glu Ala Lys Gly Ala Glu Ser Ala		
1300	1305	1310
Glu Ser Ala Asp Ala Ala Ile Met Asn Asn Asp Pro Asn Phe Thr Glu		
1315	1320	1325
Thr Ile Asp Glu Ser Lys Lys Glu Trp Leu Ile		
1330	1335	

485 490 495
 Gln Val Lys Thr Gly Glu Lys Tyr Phe Phe Gly Gly Phe Leu Asn Gln
 500 505 510
 Met Asn Asn Ser Ser His Ser Val Leu Gln Pro Ser Phe Gln Gly Cys
 515 520 525
 Met Gln Leu Ile Gln Val Asp Asp Gln Leu Val Asn Leu Tyr Glu Val
 530 535 540
 Ala Gln Arg Lys Pro Gly Ser Phe Ala Asn Val Ser Ile Asp Met Cys
 545 550 555 560
 Ala Ile Ile Asp Arg Cys Val Pro Asn His Cys Glu His Gly Gly Lys
 565 570 575
 Cys Ser Gln Thr Trp Asp Ser Phe Lys Cys Thr Cys Asp Glu Thr Gly
 580 585 590
 Tyr Ser Gly Ala Thr Cys His Asn Ser Ile Tyr Glu Pro Ser Cys Glu
 595 600 605
 Ala Tyr Lys His Leu Gly Gln Thr Ser Asn Tyr Tyr Trp Ile Asp Pro
 610 615 620
 Asp Gly Ser Gly Pro Leu Gly Pro Leu Lys Val Tyr Cys Asn Met Thr
 625 630 635 640
 Glu Asp Lys Val Trp Thr Ile Val Ser His Asp Leu Gln Met Gln Thr
 645 650 655
 Pro Val Val Gly Tyr Asn Pro Glu Lys Tyr Ser Val Thr Gln Leu Val
 660 665 670
 Tyr Ser Ala Ser Met Asp Gln Ile Ser Ala Ile Thr Asp Ser Ala Glu
 675 680 685
 Tyr Cys Glu Gln Tyr Val Ser Tyr Phe Cys Lys Met Ser Arg Leu Leu
 690 695 700
 Asn Thr Pro Asp Gly Ser Pro Tyr Thr Trp Trp Val Gly Lys Ala Asn
 705 710 715 720
 Glu Lys His Tyr Tyr Trp Gly Gly Ser Gly Pro Gly Ile Gln Lys Cys
 725 730 735
 Ala Cys Gly Ile Glu Arg Asn Cys Thr Asp Pro Lys Tyr Tyr Cys Asn
 740 745 750
 Cys Asp Ala Asp Tyr Lys Gln Trp Arg Lys Asp Ala Gly Phe Leu Ser
 755 760 765
 Tyr Lys Asp His Leu Pro Val Ser Gln Val Val Val Gly Asp Thr Asp
 770 775 780
 Arg Gln Gly Ser Glu Ala Lys Leu Ser Val Gly Pro Leu Arg Cys Gln
 785 790 795 800
 Gly Asp Arg Asn Tyr Trp Asn Ala Ala Ser Phe Pro Asn Pro Ser Ser
 805 810 815
 Tyr Leu His Phe Ser Thr Phe Gln Gly Glu Thr Ser Ala Asp Ile Ser
 820 825 830
 Phe Tyr Phe Lys Thr Leu Thr Pro Trp Gly Val Phe Leu Glu Asn Met
 835 840 845
 Gly Lys Glu Asp Phe Ile Lys Leu Glu Leu Lys Ser Ala Thr Glu Val
 850 855 860
 Ser Phe Ser Phe Asp Val Gly Asn Gly Pro Val Glu Ile Val Val Arg
 865 870 875 880
 Ser Pro Thr Pro Leu Asn Asp Asp Gln Trp His Arg Val Thr Ala Glu
 885 890 895
 Arg Asn Val Lys Gln Ala Ser Leu Gln Val Asp Arg Leu Pro Gln Gln
 900 905 910
 Ile Arg Lys Ala Pro Thr Glu Gly His Thr Arg Leu Glu Leu Tyr Ser

<210> 5303
 <211> 334
 <212> DNA
 <213> Homo sapiens

<400> 5303
 cgtacgcacg ccactgacag ccgcccagca gaagtacaag aagggcgatg tggctctgcac
 60
 acccagcggg atacgaaaga agttcaacgg caagccgggg cgcccggctg ggctcacgag
 120
 atggctgcat gaaggagtca cagcggcgag gctactgctc acgccacctg tccatgcgaa
 180
 ccaaagagat ggaaggcctg gcagacagtg ggcctggcgg ggcggggccgg cccgcggccg
 240
 tggcagcccc tgagggcagc acggagtttg actggggtga tgagacgtcg agggacagtg
 300
 gaggccagca gtgtggcgac tcgtggagac tcac
 334

<210> 5304
 <211> 95
 <212> PRT
 <213> Homo sapiens

<400> 5304
 Met Trp Ser Ala His Pro Ala Glu Tyr Glu Arg Ser Ser Thr Ala Ser
 1 5 10 15
 Arg Gly Ala Arg Leu Gly Ser Arg Asp Gly Cys Met Lys Glu Ser Gln
 20 25 30
 Arg Arg Gly Tyr Cys Ser Arg His Leu Ser Met Arg Thr Lys Glu Met
 35 40 45
 Glu Gly Leu Ala Asp Ser Gly Pro Gly Gly Ala Gly Arg Pro Ala Ala
 50 55 60
 Val Ala Ala Arg Glu Gly Ser Thr Glu Phe Asp Trp Gly Asp Glu Thr
 65 70 75 80
 Ser Arg Asp Ser Gly Gly Gln Gln Cys Gly Asp Ser Trp Arg Leu
 85 90 95

<210> 5305
 <211> 582
 <212> DNA
 <213> Homo sapiens

<400> 5305
 nttgccggcc cctgcacatt taggatatgc tcctggatgg ggagtgggtt gtgcccaggg
 60
 cctctgtccc ccaggatgtc ttgtggtggc ggtcgccgt tctgcccccc agggcacccc
 120
 ctgttgtagg cactggctag ggaggggcag gcctccttcc tgcccctcga gacactcttg
 180
 ggagatgcat tttccgtctg gctcacaggg ggaggggtgag gctttgtacc ccagcccctg
 240
 cccagggcac tgtgaggggtg ggtgctggct gagcccctgg ggcagaagga gtggggcagg
 300

cgggggtcttt gttctcggtt cccacagcag agccagggtga gggggggcct gccaggacta
 360
 gacagaagtg gggcggtctg aacctgctt ccagccatgg ccagggggcca cggaacccgg
 420
 caggggtgtc tgaagccgcc ctgtcagctg gccgggtccaa gcctgtgggt ggagctgggt
 480
 tgtgtttatc taataaagtc ccacagggtgc ctcaaaaaaa aaaaaaaaaa aaaaaaaaaa
 540
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 582

<210> 5306

<211> 62

<212> PRT

<213> Homo sapiens

<400> 5306

Met	Ala	Arg	Gly	His	Gly	Thr	Arg	Gln	Gly	Cys	Leu	Lys	Pro	Pro	Cys
1				5					10					15	
Gln	Leu	Ala	Gly	Pro	Ser	Leu	Trp	Leu	Glu	Leu	Val	Cys	Val	Tyr	Leu
			20					25					30		
Ile	Lys	Ser	His	Arg	Cys	Leu	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
		35				40					45				
Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
	50					55					60				

<210> 5307

<211> 1551

<212> DNA

<213> Homo sapiens

<400> 5307

cagggctggt tgacagtgtg cgtctttcca atcccatggt cctccattcg tgtgtctggt
 60
 ataaaactga gtgaaggctg ctatgacctg tgttcaactt gggtacaggg aggtgcaaac
 120
 cattctgtct cccagccttt cttctctctt tgtgtgtctc cagcacttcc ttcttttcta
 180
 acatggcctg gagagagtct ctctctcctt gtctctgtct cttaataata gtttttaacg
 240
 tggacatctc ttccttggtg cagtgggttt taaatactga gaagaaccaa gtcagggttt
 300
 ttaaagcaga ctaaaagcat gaaattgctt tcagaagaat gtatatcatc gggaaaagtt
 360
 cgggggcaga gtgggggaat caggctttat tcaaaagaaa cagttgaaaa catgggactt
 420
 tttctaccca atgcccattt cagcactcct ctgagactaa ttgggaaacg gggaaattct
 480
 tggaattttt tttttaagaa acttttttgt gtttttttta attttagggt acttattagt
 540
 gaaacctcat ttttagatctg acattggtag atagatggat ttaggcaaat atgatgcgtt
 600
 tgtggggaat ccacgtgggt gacgttagaa cctcccttct gcagactggt gcctgtcatc
 660

taagcgaatt ggaaatgctg agcttccata agtcagctga gttttaaagg taaacgttat
 720
 ggctgaagta gtaaagcacc tgaccacaaa acctcttgta aaaacagccc tgagtaggta
 780
 tttccagggc tccacaaagt tgcttatggg aatcctgagc tgcttttcac catctcaaga
 840
 agcctaagaa gttatatatt taatcaggta gacaaaacag ttcaaagcat aagggtccatg
 900
 gtgggtggaaa atggatgcaa gtgattctaa gtttgtggat ttgtggatag cagagggatc
 960
 gggacctctt ggaggaaccc tgggtaccaa gctcccaggc ccttcctcta tcatggatgc
 1020
 tgggtgactt tgggaagtca ccacctcttc ccaagcctgt ttcccatatc acagatgtgg
 1080
 ggccatggcc tcgatgatgg tctccacagg tctttccacc tctgtgagtc caagtcagg
 1140
 caatcagcaa ggacctatct ctgccctggg tcagctcctc agaaccaacc cccagcatct
 1200
 ctaaagcaaa agcctcacct caagggctgc tcagaagaga gcaccttcag catgagttgt
 1260
 tgctggaaga tctaataagc tgtgtttcct gggaagtggg gctttactta gccctgtgga
 1320
 caacttctct atgcatctgt gtgagcagat gatcattgta ttacctttta tcggtagtaa
 1380
 gcttggaata ataatttaag aatacaatgg agaaatgtaa ataagtatct atgtaaattt
 1440
 gtttaaaata aactgaatgt atttaatggg ccatttatat gttcttttat gtaacatgta
 1500
 gtttaataaa gttcctggtt atgagagtca tgtttcatct cagcttcttc c
 1551

<210> 5308

<211> 112

<212> PRT

<213> Homo sapiens

<400> 5308

Met	Leu	Gly	Val	Gly	Ser	Glu	Glu	Leu	Thr	Gln	Gly	Arg	Asp	Gly	Ser
1				5					10					15	
Leu	Leu	Ile	Asp	Leu	Thr	Trp	Thr	His	Arg	Gly	Gly	Lys	Thr	Cys	Gly
			20					25					30		
Asp	His	His	Arg	Gly	His	Gly	Pro	Thr	Ser	Val	Ile	Trp	Glu	Thr	Gly
		35					40					45			
Leu	Gly	Arg	Gly	Gly	Asp	Phe	Pro	Lys	Ser	Pro	Ser	Ile	His	Asp	Arg
	50					55					60				
Gly	Arg	Ala	Trp	Glu	Leu	Gly	Thr	Gln	Gly	Ser	Ser	Lys	Arg	Ser	Arg
65				70				75					80		
Ser	Leu	Cys	Tyr	Pro	Gln	Ile	His	Lys	Leu	Arg	Ile	Thr	Cys	Ile	His
				85				90					95		
Phe	Pro	Pro	Pro	Trp	Thr	Leu	Cys	Phe	Glu	Leu	Phe	Cys	Leu	Pro	Asp
			100					105					110		

<210> 5309

<211> 2078

<212> DNA

<213> Homo sapiens

<400> 5309

nncgcagctg tggccggaga ggtgggagtc ggagcgaggc cctctcgggg gagcaggggtg
60
aacgccggcc actctaggat cctcactcgg ggagaggagg catagctcgc ggggtcacc
120
tccacccgca acgtactccg ggtcggcctt gcgctcgggg cctgagaggg gcggcggcgg
180
ggtcaggggc cgcacaaaga atgaaccagc agtgggaagag aaaatactgt aagctggctg
240
actgctggtg aagaaaatgc tttatTTTTg tggcaggcat ctgtgggac tgtaatagaa
300
atgatggctg gctgtgggtga aattgatcat tcaataaaca tgcttcctac aaacaggaaa
360
gcgaacgagt cctgttctaa tactgcacct tctttaaccg tccctgaatg tgccatttgt
420
ctgcaaacat gtgttcatcc agtcagtctg ccctgtaagc acgttttctg ctatctatgt
480
gtaaaaggag cttcatggct tggaaagcgg tgtgctcttt gtcgacaaga aattcccag
540
gatttccttg acaagccaac cttgttgtca ccagaagaac tcaaggcagc aagtagagga
600
aatggtgaat atgcatggta ttatgaagga agaaatgggt ggtggcagta cgatgagcgc
660
actagtagag agctggaaga tgctttttcc aaaggtaaaa agaactga aatgttaatt
720
gctggcttct tgtatgtcgc tgatcttgaa aacatggttc aatataggag aaatgaacat
780
ggacgtcgca ggaagattaa gcgagatata atagatatac caaagaaggg agtagctgga
840
cttaggctag actgtgatgc taataccgta aacctagcaa gagagagctc tgctgacgga
900
gcggacagtg tatcagcaca gagtggagct tctgttcagc ccctagtgtc ttctgtaagg
960
cccctaacat cagtagatgg tcagttaaca agccctgcaa caccatcccc tgatgcaagc
1020
acttctctgg aagactcttt tgctcattta caactcagtg gagacaacac agctgaaagg
1080
agtcataggg gagaaggaga agaagatcat gaatcaccat cttcaggcag ggtaccagca
1140
ccagacacct ccattgaaga aactgaatca gatgccagta gtgatagtga ggatgtatct
1200
gcagttgttg cacagcactc cttgacccaa cagagacttt tggtttctaa tgcaaaccag
1260
acagtaccgc atcgatcaga tcgatcggga actgatcgat cagtagcagg ggggtggaaca
1320
gtgagtgtca gtgtcagatc tagaaggcct gatggacagt gcacagtaac tgaagtttaa
1380
ataaaaaatgt cttcagctcc atgctcaagg ttgaaaggggt tacctgtaaa tttctgcccc
1440
cataacatta tactcatccc tagtagtgca ttttgggagt tgggggtggga aggggtatgg
1500

gaaggataga ctcataatta aaatgtctaa catgtctctg ttgagaaatt tatttaatgt
 1560
 aaggaacttg ggtgttaata gttgagagct gtttagtaat aaccagttt tcttgaggtc
 1620
 tgtttacttt atacttttta aaaacttctg tagttctttt ggccagtgtg tttgtattat
 1680
 ctgtgcatta atggctctca tctgactcct gcattgtgtc ttatttttct gcatggattg
 1740
 gcataagacc attactaaaa tttggcacct gtgagatgtt tgatattatg aacaggaaac
 1800
 ataatttaat gtatgaatag atgtgaattt gggatttcaa aatagatgaa taacaactat
 1860
 tttatagtaa agttattgaa atggaaatga aaacagccag taacttatgt ttcagaatgt
 1920
 ttgtaacaca cttcatggtg ttcccatagg ctttgcgtgc tagtcttata gtttgaggtt
 1980
 tttttggtct gcatttttct ttttgattac aaaatttata atttaataaa tactagagtt
 2040
 tatcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
 2078

<210> 5310

<211> 359

<212> PRT

<213> Homo sapiens

<400> 5310

Met	Met	Ala	Gly	Cys	Gly	Glu	Ile	Asp	His	Ser	Ile	Asn	Met	Leu	Pro
1				5					10					15	
Thr	Asn	Arg	Lys	Ala	Asn	Glu	Ser	Cys	Ser	Asn	Thr	Ala	Pro	Ser	Leu
			20					25					30		
Thr	Val	Pro	Glu	Cys	Ala	Ile	Cys	Leu	Gln	Thr	Cys	Val	His	Pro	Val
			35				40					45			
Ser	Leu	Pro	Cys	Lys	His	Val	Phe	Cys	Tyr	Leu	Cys	Val	Lys	Gly	Ala
			50			55					60				
Ser	Trp	Leu	Gly	Lys	Arg	Cys	Ala	Leu	Cys	Arg	Gln	Glu	Ile	Pro	Glu
					70					75				80	
Asp	Phe	Leu	Asp	Lys	Pro	Thr	Leu	Leu	Ser	Pro	Glu	Glu	Leu	Lys	Ala
				85					90					95	
Ala	Ser	Arg	Gly	Asn	Gly	Glu	Tyr	Ala	Trp	Tyr	Tyr	Glu	Gly	Arg	Asn
			100					105					110		
Gly	Trp	Trp	Gln	Tyr	Asp	Glu	Arg	Thr	Ser	Arg	Glu	Leu	Glu	Asp	Ala
			115				120					125			
Phe	Ser	Lys	Gly	Lys	Lys	Asn	Thr	Glu	Met	Leu	Ile	Ala	Gly	Phe	Leu
			130			135					140				
Tyr	Val	Ala	Asp	Leu	Glu	Asn	Met	Val	Gln	Tyr	Arg	Arg	Asn	Glu	His
					150					155				160	
Gly	Arg	Arg	Arg	Lys	Ile	Lys	Arg	Asp	Ile	Ile	Asp	Ile	Pro	Lys	Lys
				165				170						175	
Gly	Val	Ala	Gly	Leu	Arg	Leu	Asp	Cys	Asp	Ala	Asn	Thr	Val	Asn	Leu
			180				185					190			
Ala	Arg	Glu	Ser	Ser	Ala	Asp	Gly	Ala	Asp	Ser	Val	Ser	Ala	Gln	Ser
			195				200					205			
Gly	Ala	Ser	Val	Gln	Pro	Leu	Val	Ser	Ser	Val	Arg	Pro	Leu	Thr	Ser

210 215 220
 Val Asp Gly Gln Leu Thr Ser Pro Ala Thr Pro Ser Pro Asp Ala Ser
 225 230 235 240
 Thr Ser Leu Glu Asp Ser Phe Ala His Leu Gln Leu Ser Gly Asp Asn
 245 250 255
 Thr Ala Glu Arg Ser His Arg Gly Glu Gly Glu Glu Asp His Glu Ser
 260 265 270
 Pro Ser Ser Gly Arg Val Pro Ala Pro Asp Thr Ser Ile Glu Glu Thr
 275 280 285
 Glu Ser Asp Ala Ser Ser Asp Ser Glu Asp Val Ser Ala Val Val Ala
 290 295 300
 Gln His Ser Leu Thr Gln Gln Arg Leu Leu Val Ser Asn Ala Asn Gln
 305 310 315 320
 Thr Val Pro Asp Arg Ser Asp Arg Ser Gly Thr Asp Arg Ser Val Ala
 325 330 335
 Gly Gly Gly Thr Val Ser Val Ser Val Arg Ser Arg Arg Pro Asp Gly
 340 345 350
 Gln Cys Thr Val Thr Glu Val
 355

<210> 5311

<211> 572

<212> DNA

<213> Homo sapiens

<400> 5311

tgccactgtg aaggagatga tgagagcccc ctgatcaccc cctgccactg cacaggaagc
 60
 ctccacttcg tgcaccaggc ctacctgcag cagtggatca agagctccga cacgcgctgc
 120
 tgcgagctct gcaagtatga gttcatcatg gagaccaagc tgaagccact gagaaaatgg
 180
 gagaagtgc agatgacgtc cagcgagcgc aggaagatca tgtgctcagt gacattccac
 240
 gtcattgcc aacatgtgt ggtctggtcc ttgtatgtgc tcattgaccg tcctgctgag
 300
 gagatcaagc aggggcaggc aacaggaatc ctagaatggc ccttttggac taaattggtg
 360
 gttgtggcca tcggcttcac cagaggactt ctttttatgt atgttcagt taaagtgtat
 420
 gtgcaattgt ggaagagact caaggcctat aatagagtga tctatgttca aaactgtcca
 480
 gaaacaagca aaaagaatat ttttgaaaaa tctccactaa cagagcccaa ctttgaaaat
 540
 aaacatggat atggaatctg tcattccgac ac
 572

<210> 5312

<211> 190

<212> PRT

<213> Homo sapiens

<400> 5312

Cys His Cys Glu Gly Asp Asp Glu Ser Pro Leu Ile Thr Pro Cys His

1	5	10	15
Cys Thr Gly Ser Leu His Phe Val His Gln Ala Tyr Leu Gln Gln Trp			
	20	25	30
Ile Lys Ser Ser Asp Thr Arg Cys Cys Glu Leu Cys Lys Tyr Glu Phe			
	35	40	45
Ile Met Glu Thr Lys Leu Lys Pro Leu Arg Lys Trp Glu Lys Leu Gln			
	50	55	60
Met Thr Ser Ser Glu Arg Arg Lys Ile Met Cys Ser Val Thr Phe His			
65	70	75	80
Val Ile Ala Ile Thr Cys Val Val Trp Ser Leu Tyr Val Leu Ile Asp			
	85	90	95
Arg Pro Ala Glu Glu Ile Lys Gln Gly Gln Ala Thr Gly Ile Leu Glu			
	100	105	110
Trp Pro Phe Trp Thr Lys Leu Val Val Val Ala Ile Gly Phe Thr Arg			
	115	120	125
Gly Leu Leu Phe Met Tyr Val Gln Cys Lys Val Tyr Val Gln Leu Trp			
	130	135	140
Lys Arg Leu Lys Ala Tyr Asn Arg Val Ile Tyr Val Gln Asn Cys Pro			
145	150	155	160
Glu Thr Ser Lys Lys Asn Ile Phe Glu Lys Ser Pro Leu Thr Glu Pro			
	165	170	175
Asn Phe Glu Asn Lys His Gly Tyr Gly Ile Cys His Ser Asp			
	180	185	190

<210> 5313
 <211> 322
 <212> DNA
 <213> Homo sapiens

<400> 5313
 cggggccgcc gagaggaaga ggggtgacaag cgcagcgttg cccccagac tcgggtcctg
 60
 aaaggcgtca tgcgagtagg catcctggcg aaaggcctcc tcctgctggtg ggacaggaac
 120
 gtgcgcctcg ctctgctctg ctccgagaag cccacgcaca gcctgctgcg gaggatcgcc
 180
 cagcagctgc cccggcaaca caggcaattc cacgttgtgt gcgactggcc tgtgcatatg
 240
 gaggtgttca gtgacctggc cctggacact cctgctaaca ggacacacac atactctctt
 300
 acacacatac atgtccacac ac
 322

<210> 5314
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400> 5314
 Arg Gly Arg Arg Glu Glu Gly Asp Lys Arg Ser Val Ala Pro Gln
 1 5 10 15
 Thr Arg Val Leu Lys Gly Val Met Arg Val Gly Ile Leu Ala Lys Gly
 20 25 30
 Leu Leu Leu Arg Gly Asp Arg Asn Val Arg Leu Ala Leu Leu Cys Ser

```
<210> 5315
<211> 2298
<212> DNA
<213> Homo sapiens
```

4484

acactgtcgc acactcagag cctggagacg ctgaacctgg gccacaaccc catcgggaac
 1200
 gagggtgtgc ggcacctcaa gaacgggctc atcagcaacc gcagcgtgct gcgcctcggg
 1260
 ctggcctcca ccaagctcac gtgcgagggc gcggtggcgg tggcggagtt catcgtgag
 1320
 agccccgcc tcctgagact ggaccttcgg gagaacgaga tcaagacagg cgggctcatg
 1380
 gcactgtcgt tggccctcaa ggtgaaccac tctgtctgc gcctggacct cgaccgtgaa
 1440
 cccaagaaaag aggcggtgaa gagcttcac gagacgcaga aggcgctgct ggccgagatc
 1500
 cagaacggct gcaagcgcaa cttggtgctg gcgcgggaga gggaggagaa ggagcagccg
 1560
 ccacagctgt cggcctccat gcctgagacc accgccaccg agccccagcc cgacgcagag
 1620
 cccgcgctg ggggtgcagaa cggggccccc agccccgcac ccagcccga ctcagactca
 1680
 gactcggact cggatgggga ggaagaggag gaagaggaag gggagaggga cgagaccccc
 1740
 tccggggcca ttgacaccg ggacacaggg tcctctgagc ctcagccacc accggagccg
 1800
 cctcggtcag ggccaccact gccaacggc ctgaagcccg agttcgccct ggcactgccc
 1860
 cctgagccgc ccccggggccc tgaggtcaag gggggcagct gcggcctgga gcacgaactg
 1920
 agctgtcca agaacgagaa ggagctcgag gagctgcttc tggaaagccag tcaggaatcc
 1980
 gggcaggaga cactgtgaca ctttaggtga ggccaggccc gggggccaca gcactcggga
 2040
 ggagctgaga gagcctctgg ctctgacagt ctctcccca atctctctc cccaagttcc
 2100
 cttttccgg tcggtctgag atgagctgag gccagagcca tgagaatctg ctcaccttc
 2160
 cccagcctt cctgaggccc aggatgccag ggggtggggc cattctgggg cccccctccc
 2220
 cccacagcaa cactacaagg ggtgcaggag ctacaggag tggccctccg cgctgactc
 2280
 aagcacttct atttatga
 2298

<210> 5316

<211> 544

<212> PRT

<213> Homo sapiens

<400> 5316

Gln	Asn	Val	Thr	Val	Asp	Glu	Val	Ile	Gly	Ala	Tyr	Lys	Gln	Ala	Cys
1				5					10					15	
Gln	Lys	Leu	Asn	Cys	Arg	Gln	Ile	Pro	Lys	Leu	Leu	Arg	Gln	Leu	Gln
			20					25					30		
Glu	Phe	Thr	Asp	Leu	Gly	His	Arg	Leu	Asp	Cys	Leu	Asp	Leu	Lys	Gly
		35					40					45			
Glu	Lys	Leu	Asp	Tyr	Lys	Thr	Cys	Glu	Ala	Leu	Glu	Glu	Val	Phe	Lys

50 55 60
 Arg Leu Gln Phe Lys Val Val Asp Leu Glu Gln Thr Asn Leu Asp Glu
 65 70 75 80
 Asp Gly Ala Ser Ala Leu Phe Asp Met Ile Glu Tyr Tyr Glu Ser Ala
 85 90 95
 Thr His Leu Asn Ile Ser Phe Asn Lys His Ile Gly Thr Arg Gly Trp
 100 105 110
 Gln Ala Ala Ala His Met Met Arg Lys Thr Ser Cys Leu Gln Tyr Leu
 115 120 125
 Asp Ala Arg Asn Thr Pro Leu Leu Asp His Ser Ala Pro Phe Val Ala
 130 135 140
 Arg Ala Leu Arg Ile Arg Ser Ser Leu Ala Val Leu His Leu Glu Asn
 145 150 155 160
 Ala Ser Leu Ser Gly Arg Pro Leu Met Leu Leu Ala Thr Ala Leu Lys
 165 170 175
 Met Asn Met Asn Leu Arg Glu Leu Tyr Leu Ala Asp Asn Lys Leu Asn
 180 185 190
 Gly Leu Gln Asp Ser Ala Gln Leu Gly Asn Leu Leu Lys Phe Asn Cys
 195 200 205
 Ser Leu Gln Ile Leu Asp Leu Arg Asn Asn His Val Leu Asp Ser Gly
 210 215 220
 Leu Ala Tyr Ile Cys Glu Gly Leu Lys Glu Gln Arg Lys Gly Leu Val
 225 230 235 240
 Thr Leu Val Leu Trp Asn Asn Gln Leu Thr His Thr Gly Met Ala Phe
 245 250 255
 Leu Gly Met Thr Leu Ser His Thr Gln Ser Leu Glu Thr Leu Asn Leu
 260 265 270
 Gly His Asn Pro Ile Gly Asn Glu Gly Val Arg His Leu Lys Asn Gly
 275 280 285
 Leu Ile Ser Asn Arg Ser Val Leu Arg Leu Gly Leu Ala Ser Thr Lys
 290 295 300
 Leu Thr Cys Glu Gly Ala Val Ala Val Ala Glu Phe Ile Ala Glu Ser
 305 310 315 320
 Pro Arg Leu Leu Arg Leu Asp Leu Arg Glu Asn Glu Ile Lys Thr Gly
 325 330 335
 Gly Leu Met Ala Leu Ser Leu Ala Leu Lys Val Asn His Ser Leu Leu
 340 345 350
 Arg Leu Asp Leu Asp Arg Glu Pro Lys Lys Glu Ala Val Lys Ser Phe
 355 360 365
 Ile Glu Thr Gln Lys Ala Leu Leu Ala Glu Ile Gln Asn Gly Cys Lys
 370 375 380
 Arg Asn Leu Val Leu Ala Arg Glu Arg Glu Glu Lys Glu Gln Pro Pro
 385 390 395 400
 Gln Leu Ser Ala Ser Met Pro Glu Thr Thr Ala Thr Glu Pro Gln Pro
 405 410 415
 Asp Asp Glu Pro Ala Ala Gly Val Gln Asn Gly Ala Pro Ser Pro Ala
 420 425 430
 Pro Ser Pro Asp Ser Asp Ser Asp Ser Asp Ser Asp Gly Glu Glu Glu
 435 440 445
 Glu Glu Glu Glu Gly Glu Arg Asp Glu Thr Pro Ser Gly Ala Ile Asp
 450 455 460
 Thr Arg Asp Thr Gly Ser Ser Glu Pro Gln Pro Pro Pro Glu Pro Pro
 465 470 475 480
 Arg Ser Gly Pro Pro Leu Pro Asn Gly Leu Lys Pro Glu Phe Ala Leu

<400> 5318
Arg Gly Arg Pro Gly Ser Cys Ser Thr Arg Pro Ser Cys Gly Ala Arg
1 5 10 15
Arg Pro Cys Val Ser Gly Thr Val Pro Ser Ser Cys Gln Leu Gly Gly

	20		25		30										
Pro	Thr	Ser	Pro	Thr	Ser	Ala	Ala	Ser	Arg	Ala	Cys	Gly	Ser	Arg	Gly
	35					40					45				
Ala	Ala	Thr	Trp	Trp	Ser	Arg	Ser	Ser	Gly	Ser	Thr	Thr	Leu	Arg	Arg
	50					55					60				
Pro	Ser	Trp	Ala	Ser	Ser	Ser	Thr	Arg	Ala	Ser	Thr	Gly	Thr	Arg	Ser
65					70					75				80	
Pro	Ala	Ala	Ala	Ser	Arg	Arg	Pro	Cys	Gly	Ser	Pro	Ala	Arg	Gly	Arg
				85					90					95	
Thr	Ser	Trp	Ser	Ala	Arg	Tyr	Thr	Ser	Pro	Arg	Met	Trp	Thr	Lys	Met
	100						105					110			
Thr	Cys	Arg	Arg	Cys	Arg	Thr	Ser	Ala	Trp	Trp	Trp	Ala	Trp	Ser	Ser
	115					120						125			
Met	Ser	Arg	Cys												
	130														

<210> 5319

<211> 4231

<212> DNA

<213> Homo sapiens

<400> 5319

```

nncggccgcg cggcaggaac tggcgctgaa gaccctgggg acagatggcc tttttctctt
60
ttcctccttg gacactgacg gggatatgta catcagccct gaggagtcca aaccatttgc
120
tgagaagcta acaggttcaa ctcccgcggc cagctacgag gaggaggagt tgccccctga
180
ccctagcgag gagacgtcca ccatagaagc ccgattccag cctctgctcc cggagaccat
240
gaccaagagc aaagatggct tcctaggggt ctcccgctc gcctgtccg gcctccgaaa
300
ctggacagcc gccgcctcac caagtgcagt gtttgccacc cgccacttcc agcccttctc
360
tcccccgcca ggccaggagc tgggtgagcc ctggtggatc atccccagtg agctgagcat
420
gttacttggc tacctgtcca acaaccgctt ctatccaccg ccgccaagg gcaaggagg
480
catcatccac cggctcctga gcatgttcca ccctcgccc tttgtgaaga cccgctttgc
540
ccctcaggga gctgtggcct gcctgactgc catcagcgac ttctactaca ctgtgatgtt
600
ccggtatccat gccgagttcc agctcagtga gccgcccgcac ttcccctttt ggttctcccc
660
tgctcagttc accggccaca tcctctctc caaagacgcc acccacgtcc gcgacttccg
720
gctcttcgtg cccaaccaca ggtctctgaa tgtggacatg gagtggcttt acggggccag
780
tgaaagcagc aacatggagg tggacatcgg ctacataccc cagatggagc tggaggccac
840
gggcccctct gtgccctccg tgatcctgga tgaggatggc agcatgatcg acagccacct
900
gccctcaggg gagccccctgc agtttgtgtt tgaggagatc aagtggcagc aggagctgag
960

```

ctgggaggag gctgcccggc gcctggaggt ggccatgtac cccttcaaga aggtctccta
1020
cttgccgttc actgaggcct tcgaccgagc caaggctgag aacaagctgg tgcactcaat
1080
cctgctgtgg ggggccctgg atgaccagtc ctgctgaggt tcagggcgga ctctccggga
1140
gactgtcctg gaaagttcgc ccatacctcac cctgctcaac gagagcttca tcagcacctg
1200
gtccctggtg aaggagctgg aggaactgca gaacaaacag gagaactcgt cccaccagaa
1260
gctggctggc ctgcacctgg agaagtacag cttccccgtg gagatgatga tctgcctgcc
1320
caatggcacc gtggtccatc acatcaatgc caactacttc ttggacatca cctccgtgaa
1380
gcccagaggaa atcgagagca atctcttcag cttctcatcc acctttgaag acccgtccac
1440
ggccacctac atgcagttcc tgaaggaggg actccggcgt ggcccgcccc tcctccagcc
1500
ctagagtgcc tggacgggat ctgatgcaca ggccccacg cctcagagcc agagtgggtcc
1560
tcagccatt tcagactgca gatgccgcc actcccaccc cactcctagg ctgccttggg
1620
gggtacaaga tccactgagg gtggccacca cagccttggc tccatggtgg cgggtagaca
1680
agggatgcct gggctgactg ggcagaggaa cctctagctc tgactgtcac tcggctctcc
1740
ctaccattt ggctctggaa gctgcttggc cccccagat cagggcctgg gtgaactccc
1800
tggaccttct ctagccagcc gcacagtcta ggcccttgtg ggggtgaagaa tggagggagg
1860
agcaggctag gaagacgggg ccaccaccct ctccttgctt tcagcccttc ccacaggaaa
1920
catcaagaag ccccagccag gagggggccag gctgccaagg cggctccctt gtttatctag
1980
agccttcgtt cctggccata ccccgactg cctcctgtg cctgatgtcc ccagctgggg
2040
tcagtctcaa caggagccag tcttctggag cctctgggca gaaccctcca tcagagtgga
2100
aatcagacgg gacccctgc agcttccctg accacgccac tgaccagcta tctggggaag
2160
tttactgtga aggggtttct gcctttagca atggggttca ctaagggggg tcccagggcc
2220
cagggccaaag gcactccac cgcctacctt agcacagggt ctctgcagga ctgcgggagc
2280
cagcgctcct gccgcccctc ttgccctca gaccttgcac ccacagaagc acaaccagc
2340
caaacaccac agccttctcc agagccggca ctgtccggc aaccaggggt gcccaggt
2400
agctcttcta cctctggggc accacggact ccccttggcc actcttggga ctttgggtcca
2460
cgtcctgagc cactgaccac ggccagtctc tctttttata tgtgcagaaa agtgttttta
2520
cacaaaactt ctcagtgttt gtaggtattt ttttataacc ccagtgtga ggagaaagga
2580

ggggcagtgg cttccccggc agcagcccca tgatggctga atccgaaatc ctcgatgggt
2640
ccagcttgat gtctttgcag ctgcacctat gggaagaagt agtcctctct tccttctcct
2700
cttcagcttt ttaaaaacag tcctcagagg atccatgata ccagcactg tcccatcctc
2760
caciaaggcc cacaggcatg cctgtactct ctttcattaa ggtcttgaag tcaggctgcc
2820
ccctccccag cccccagttc tctccccacc ccctacccc acccggggct cactcagcct
2880
ggcagaggaa gaaggaaggc agacatctcc gcagccactc ctgggccttt tatgtgccga
2940
gttaccacac ttgccttggg cgtgtccact gagccttccc cagccagtct tgttctcaat
3000
tttgttttgt tttgttttgt tttgagacgg agtcttgctc tgntcaccca ggctggagtg
3060
ctatggctcg atcttggctc actgcaacct ccacctcca ggttcaagca attctcttgc
3120
cccagcctcc cgagtagctg ggattacagg tgcattccac catggctggc taatttttgt
3180
atttttagta gagatggggg ttcaccatat tggtcaggct gatctggaac tcctgacctc
3240
aggtgatcca cctgcctcag cctcccaaag tgetgggatt acaggcgtga gcaatcgtgc
3300
ccagccttgt tcttaatttt gtatcatcca gtcactgcta atattacacg caccttctca
3360
cttaatcctc acgacaagcc tgtgaggcag atgtcattg tcccatctt gatgaaactt
3420
gagtctcagg gaagtgaagt gacttgccca gggtcactca ggtagagttg agattcaaac
3480
ccacatgtgg ctccaaagtc tgcattctga tttgggggtg ttttttggca tggcacctc
3540
acctctctcc ctgcctgttt tccccaaagt ggaaaggaag gcctttcaaa ccagagtgtc
3600
tcactccctc ctgacctcca gaccagatgg ggcattgagc agccagctca gccaggctcc
3660
ctgtgtcctg ggaggaagtg tccccatccc ccatgcccct tatggggagg gagggcgtct
3720
gatgtctctc ctctgcctcc cccccatcct gtcaggcaca ggtgacgggg gcagcccatg
3780
cgagcccttc tcctgtctgt ctgggagggc cagttccaca ttgagccagc ctggtcccat
3840
ggaaaatgat ggcctgggct ttctgaggcc ttatctgatg cctctgcagt tcatgtcccc
3900
caccaggcct cgaggctcag ggtgggagag ggccccgggc tgccctgtca ctctctaac
3960
acttccctcc cctgtcccca acatgccctg taataaaatt agagaagact aactagagtg
4020
gttctaagtg cttttccttt gagtggcatg ttgtcagct ccgtccttcc atgggggtggc
4080
tcctcttggg ggcagagtgt agctggaatg ctttcaggta ctatcttacc tatcgaaggc
4140
ttgagtgact tgcccaaaat aagttttacg atagaacaag tggtaggact tactgttttg
4200

agaatctggt gctctctggt gagagagatc t
4231

<210> 5320

<211> 96

<212> PRT

<213> Homo sapiens

<400> 5320

Met	Cys	Arg	Val	Thr	Pro	Leu	Ala	Leu	Gly	Val	Ser	Thr	Glu	Pro	Ser
1				5					10					15	
Pro	Ala	Ser	Leu	Val	Leu	Asn	Phe	Val	Leu	Phe	Cys	Phe	Val	Leu	Arg
			20					25					30		
Arg	Ser	Leu	Ala	Leu	Xaa	Thr	Gln	Ala	Gly	Val	Leu	Trp	Leu	Asp	Leu
		35					40					45			
Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Arg	Phe	Lys	Gln	Phe	Ser	Cys	Pro
		50				55					60				
Ser	Leu	Pro	Ser	Ser	Trp	Asp	Tyr	Arg	Cys	Met	Pro	Pro	Trp	Leu	Ala
65				70					75					80	
Asn	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Ser	Pro	Tyr	Trp	Ser	Gly
			85						90					95	

<210> 5321

<211> 6324

<212> DNA

<213> Homo sapiens

<400> 5321

ntccggaggc ccgagccgac cctggggcgt ccggtccggt ggtcttacag cctccaaacc
60
ccgagtgcta taccgaactg cgcgccaagg gtgggagagc tgacggcctg ggccaccctt
120
cttccttcac tgggcaggct ttgagggtgt tgtcgggtctg gactgatgaa aatccatatg
180
acctgaaaga tgtctgaaaa ttccagtgcac agtgattcat cttgtgggtg gactgtcatc
240
agtcatgagg ggtcagatat agaaatgttg aattctgtga cccccactga cagctgtgag
300
cccgccccag aatgttcacc tttagagcaa gaggagcttc aagcattgca gatagagcga
360
ggagaaagca gccaaaatgg cacagtgcct atggaagaaa ctgcttatcc agctttggag
420
gaaaccagct caacaattga ggcagaggaa caaaagatac ccgaagacag tatctatatt
480
ggaactgcc a gtgatgatc tgatattggt acccttgagc cacctaagtt agaagaaatt
540
ggaaatcaag aagttgtcat tgttgaagaa gcacagagtt cagaagactt taacatgggc
600
tcttctcta gcagccagta tactttctgt cagccagaaa ctgtattttc atctcagcct
660
agtgatgatg aatcaagtag tgatgaaacc agtaatcagc ccagtcctgc ctttagacga
720
cgccgtgcta ggaagaagac cgtttctgct tcagaatctg aagaccggct agttgctgaa
780

caagaaactg aaccttctaa ggagttgagt aaacgtcagt tcagtagtgg tctcaataag
840
tgtgttatac ttgctttggt gattgcaatc agcatgggat ttggccattt ctatggcaca
900
attcagattc agaagcgtca acagttagtc agaaagatac atgaagatga attgaatgat
960
atgaaggatt atctttccca gtgtcaacag gaacaagaat cttttataga ttataagtca
1020
ttgaaagaaa atcttgcaag gtgttggaac cttactgaag cagagaagat gtcctttgaa
1080
actcagaaaa cgaaccttgc tacagaaaat cagtatttaa gagtatccct ggagaaggaa
1140
gaaaaagcct tatcctcatt acaggaagag ttaaacaac taagagaaca gattagaata
1200
ttggaagata aagggaacag tactgaatta gttaaagaaa atcagaaact taagcagcat
1260
ttggaagagg aaaagcagaa aaaacacagc tttcttagtc aaaggagac tctgttgaca
1320
gaagcaaaga tgctaaagag agaactggag agagaacgac tagtaactac ggctttaagg
1380
ggggaactcc agcagttaag tggtagtcag ttacatggca agtcagattc tcccaatgta
1440
tatactgaaa aaaaggaaat agcaatctta cgggaaagac tcactgagct ggaacggaag
1500
ctaaccttcg aacagcagcg ttctgatttg tgggaaagat tgtatgttga ggcaaaagat
1560
caaaatggaa aacaaggaac agatggaaaa aagaaagggg gcagagggaag ccacagggct
1620
aaaaataagt caaaggaaac atttttgggt tcagttaagg aaacatttga tgccatgaag
1680
aattctacca aggagtttgt aaggcatcat aaagagaaaa ttaagcaggc taaagaagct
1740
gtgaaggaaa atctgaaaaa attctcagat tcagttaaat ccactttcag acactttaaa
1800
gataccacca agaatatctt tgatgaaaag ggtaataaaa gatttggtgc taaaaagaa
1860
gcagctgaaa aaccaagaac agtttttagt gactatttac atccacagta taaggcacct
1920
acagaaaacc atcataatag gccctactat gcaaaatgat ggaaggaaga aaagccagtt
1980
cactttaag aattcagaaa aaatacaaat tcaaagaaat gcagtcctgg gcatgattgt
2040
agagaaaatt ctcatctttt cagaaaggct tgttctggtg tatttgattg tgctcaacaa
2100
gagtccatga gcctttttta cacagtgggtg aatcctataa ggatggatga atttagacag
2160
ataattcaaa ggtacatggt aaaagaactg gatacttttt gtcactggaa cgaacttgat
2220
cagttcatca ataagttttt cctaaacggt gtctttatac atgatcagaa gctcttcact
2280
gactttgtta atgatgttaa agattatctt agaaacatga aggaatatga agtagataat
2340
gatggagtat ttgagaagtt ggatgaatat atatatagac acttctttgg tcacactttt
2400

tcccctccat atggacccag gtcggtttac ataaaaccgt gtcattacag tagtttgtaa
2460
catttgtaga ttggatagca tttttatgat ttgatgagtt tcttgtaagg ttaccgtttc
2520
taagagttgt gctttatggc cactgagaga attcagaata aattgaaaga tggagtctaa
2580
aaattattag ctgttacaaa tggaacattt cattataacg tgatcacttt gacttgagca
2640
aatgggttaa tttttatctt aaaaatcagt taagaatata taaaatccta ctttgccaa
2700
gtttgtttct tttcattata gtttatatga aaagatcacc ttaagtgaat ttattttcct
2760
ttaatctttt atgtatttat tcacttttgg aagctaggaa tgagcaacac aaattttact
2820
ctgaagtcag aagagctcat atataataat tctaagtcc cacctatttt cacttgtcca
2880
ttccatgtac cagcttagtt atgatactta gtcacataat tatctttgat aaaggtagag
2940
gcacaaagag gcaactaag caagtcaaat tctaagtgtg gtacttcata ataatttttt
3000
atccattttc atctttatat tctgtaacat gaaacttacc taatcttcaa atgttagctt
3060
cattttttac ctttgaaata cttaatcttt ctgaataaat ataatgtgtc tataaaataa
3120
tgagactgat tctggtgtct ttagttatta agctggtatc tagtcctata atgaacaaag
3180
gtgaagctgc cttgaggaga caagtgaata atttttgctt caaaggagct cacaagctaa
3240
gtaataaat gaaattaagg tatggggcat ggtggcctca ggctgtctgg aggtgtttgg
3300
aaaggcttct tgagtgaggt ggcctttgaa ctgaacttag tttttaagt agcttttgga
3360
agagaaatga ggatttgcta tgcagacagg gaagggaatt tcacttaaaa ggaaggctcat
3420
ttggagatgt gaagatacac tgctttaagg aagcagggtg gagctggagg ataagagatg
3480
cagaccatga agggcccat tttatgctaa aggttttgtc ctgtaggaca tggagaactt
3540
ctgaagaatt ttcaaggcgg gtgggataag attatattgt attttagatt acagtagtcc
3600
ccccttatct tcaggatata tgttccaaga ccccagtg atgctggaaa ccagggatag
3660
aacataatc tatatatact atgcatgaat ttcttttcc ttctttacaa tctcacacat
3720
aggtttgctt ttactataga tcttaccaat ctctcatact tttatttctc ttgagaacct
3780
tcacccttcc acttaaagga ggcgctttat agcttctctt tggcatatcc aaatgccagc
3840
atcactgttg tattttgggg tcattattaa gttacttaat catccttaat ccttatctta
3900
gggatacttg aacacaaaca ctgtggtagg ataacagtat atctgattaa cagactgcta
3960
ctaggtgatt aatgggtggg tagtgtaaat acacaagaaa aggatgattc acatcccatg
4020

tgggatggag cagaactgca ttatttcatt acattactca gaacaggcat ataattgaaa
4080
acttatgaat tttttttttt ttaattattt gagatggaat cttgctttgt cagccaggct
4140
ggagtgcagt gacacgatct cagctcactg caacctctgt ctctgggtt cagggtgattc
4200
tcctccctag tctcccaagt agctgggact atagggcacg tgccaccaca cccggcta
4260
tttcatattt ttagtagaga tggggtttca ccatgttggc caggctgttc ttgaaatcct
4320
gacctcaagt gatccacaca tgtctacctc ccaaagtgtc gggattacag tcgtgagcca
4380
ctgtaccccg cctaaaactg atgaattatt tctgaaattt tctatttaac attttcagac
4440
cacagttgac cacaggtaac ggaaacctca atcacagaaa gtaaagccgt ggatacgggtg
4500
ggactaatgt attggtagca gcctagagga ttgatgggaa aggtatgaag ctagaagggtg
4560
gtcaatataa tacagacatg agctgatgaa catctaaact gggactatac tagtaggaga
4620
ggaaaggaaa aaacatttgg aaaatagtaa cattgatatt tcttgtgaag gagaagtaga
4680
aagtaacagt gacttctaga tttctgggtt gggcatctg ttgttggata gtagtaccac
4740
tgagataggg aattcaagggt ttggggcaag ggtaattgga gatgagaatt gtgtttggag
4800
gtaactactg acattcaagt ggagagggtt agttggcagt tagttctatg gtcactctct
4860
ttgccgagac tgtatattta tcagactcct gggagaacac caacatccat ggggttgtag
4920
ggaaggctaa ggacaagagt ggggagtggg accttgaaaa tccaaaagcc atctcaagta
4980
aaaggaataa atgtgtcatg ctttttaaaa agttgatgtg cggaaaatgt tttcttggct
5040
tggaaactgg gcgccagggt gatgacagta tggacttcca gtgaagtagt gacggaagcc
5100
tgatcataga cattaaggaa agcgggtgtg gtgttgtgag cttttgctgt aagaaaaagt
5160
tgagactttt gttttgcttt gtttgtgaga gatgtgtatg ttttctgct gaggataaa
5220
gccagcgggg agggactgat ttttatagga aaggaggaaa aataatggaa acacatctca
5280
ttattttatt gtcacatttc ttttctttgt tatcttttga gtgtttccct ttttggcag
5340
tagagttatt gtctattttt tctttctata ggacaaaaaa actaatagac actcctttat
5400
ttttatatgg atatactagg attgtaattc agatatttaa tatcttttat cagtgttcag
5460
atcatagatt aatggagaaa acatttaaaa ttgttttaaa tttaaataca ttgaactcta
5520
acatagatga aaaatgtgtt tactgctttc agtcgacctg ataaaaagca acgtatggta
5580
aatattgaaa actccaggca tcgaaaacaa gagcagaagc accttcagcc acagccttat
5640

aaaaggaag gtaaattggca taaatatggt cgactaatg gaagacaaat ggcaaattctt
 5700
 gaaatagaat tggggcaatt accttttgat cctcaatact gattcacaat tgagttaaatt
 5760
 tagacaactg taagagaaaa atttatgctt tgtataatgt ttggtattga aactaatgaa
 5820
 attaccaaga tgacaatgtc ttttcttttg tttctaagta tcagtttgat aactttatat
 5880
 tattcctcag aagcattagt taaaagtcta ctaacctgca ttttctgta gtttagcttc
 5940
 gttgaatttt ttttgacact ggaaatgttc aactgtagtt ttattaagga agccaggcat
 6000
 gcaacagatt ttgtgcatga aatgagactt cctttcagtg taagagctta aagcaagctc
 6060
 agtcatacat gacaaagtgt aattaacact gatgtttgtg ttaaatttgc agcagagctt
 6120
 gagaaaagta cattgttctg gaatttcacg attaacattt tataatctta cactcacttc
 6180
 ttgtcttttt gtgggttcaa gagccctctg acttggtgaag aatttgctgc cctcttaaga
 6240
 gcttgcgtgac ttgttttctt gtgaaatttt ttgcacatct gaatatcgtg gaagaaacaa
 6300
 taaaactaca ccatgaggaa aact
 6324

<210> 5322

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5322

Met	Leu	Lys	Arg	Glu	Leu	Glu	Arg	Glu	Arg	Leu	Val	Thr	Thr	Ala	Leu
1				5				10						15	
Arg	Gly	Glu	Leu	Gln	Gln	Leu	Ser	Gly	Ser	Gln	Leu	His	Gly	Lys	Ser
		20					25						30		
Asp	Ser	Pro	Asn	Val	Tyr	Thr	Glu	Lys	Lys	Glu	Ile	Ala	Ile	Leu	Arg
		35					40					45			
Glu	Arg	Leu	Thr	Glu	Leu	Glu	Arg	Lys	Leu	Thr	Phe	Glu	Gln	Gln	Arg
		50				55					60				
Ser	Asp	Leu	Trp	Glu	Arg	Leu	Tyr	Val	Glu	Ala	Lys	Asp	Gln	Asn	Gly
65				70					75					80	
Lys	Gln	Gly	Thr	Asp	Gly	Lys	Lys	Lys	Gly	Gly	Arg	Gly	Ser	His	Arg
			85					90						95	
Ala	Lys	Asn	Lys	Ser	Lys	Glu	Thr	Phe	Leu	Gly	Ser	Val	Lys	Glu	Thr
		100					105						110		
Phe	Asp	Ala	Met	Lys	Asn	Ser	Thr	Lys	Glu	Phe	Val	Arg	His	His	Lys
		115				120						125			
Glu	Lys	Ile	Lys	Gln	Ala	Lys	Glu	Ala	Val	Lys	Glu	Asn	Leu	Lys	Lys
		130				135					140				
Phe	Ser	Asp	Ser	Val	Lys	Ser	Thr	Phe	Arg	His	Phe	Lys	Asp	Thr	Thr
145				150					155					160	
Lys	Asn	Ile	Phe	Asp	Glu	Lys	Gly	Asn	Lys	Arg	Phe	Gly	Ala	Thr	Lys
			165					170						175	
Glu	Ala	Ala	Glu	Lys	Pro	Arg	Thr	Val	Phe	Ser	Asp	Tyr	Leu	His	Pro

180 185 190
 Gln Tyr Lys Ala Pro Thr Glu Asn His His Asn Arg Pro Tyr Tyr Ala
 195 200 205
 Lys

<210> 5323
 <211> 475
 <212> DNA
 <213> Homo sapiens

<400> 5323
 gcgcgcccag ggtctggcag acacgaaaca gccaggagct gtggcaacat aactgcatgc
 60
 tgactggccc gcctcagtga tgccaggccc actgacagca gcagagagcg aggggcagtc
 120
 catagctgcc aggcctttct gccacacca cgccacttat atggcctcct gccatgggca
 180
 gagtagggag gtgaggtgct cgtggtgccc agagtcctca tcaaggagtg aaaccagagt
 240
 gtggccatag ccagtaagaa cagcacgctg cagcccagcc catcagcctc aggcactgag
 300
 ctctctgcac actccatgaa tgcagagcag catcaggctg gcctcagccc ctccccgtct
 360
 taggccagcc ccaaggggtgc tgtggttcct cgggatgcc aagctcccc aagctgtggc
 420
 tgtgcctggc tgggaccttt cccctcctg ctcaggaag tttcccaccc ccggg
 475

<210> 5324
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 5324
 Met Glu Cys Ala Glu Ser Ser Val Pro Glu Ala Asp Gly Leu Gly Cys
 1 5 10 15
 Ser Val Leu Phe Leu Leu Ala Met Ala Thr Leu Trp Phe His Ser Leu
 20 25 30
 Met Arg Thr Leu Gly Thr Thr Ser Thr Ser Pro Pro Tyr Ser Ala His
 35 40 45
 Gly Arg Arg Pro Tyr Lys Trp Arg Gly Val Gly Arg Lys Ala Trp Gln
 50 55 60
 Leu Trp Thr Ala Pro Arg Ser Leu Leu Leu Ser Val Gly Leu Ala Ser
 65 70 75 80
 Leu Arg Arg Ala Ser Gln His Ala Val Met Leu Pro Gln Leu Leu Ala
 85 90 95
 Val Ser Cys Leu Pro Asp Pro Gly Arg
 100 105

<210> 5325
 <211> 938
 <212> DNA
 <213> Homo sapiens

<400> 5325

gccggcgccg ccggttaaag tgccgcgggg caggggcccg gccgcggcca cccgctcctc
 60
 ccgctccggg cccgactgtc gggctctcgg ccgagtcgcc ccggacaatc acaaagagtg
 120
 tgtaggccag ccccggtcac agagtgcacc gtatcctgtc acttctggat gtgagggaga
 180
 agtgagtcac ctcattcccc tccgtggatc agaggacttg gactagatag aagcatgtgg
 240
 tgtctcctac gaggcctggg ccggcctgga gccctggcac ggggagccct ggggcagcag
 300
 caatccctgg gtgcccgggc cctggccagc gcaggctctg agagccggga cgagtacagc
 360
 tatgtggtgg tgggcgcggg ctccggcggg tgctgtctgg ctgggaggct cacggaggac
 420
 cccgccgagc gcgtgctgct gctggaggcc gggcccaagg acgtgcgcgc ggggagcaag
 480
 cggctctcgt ggaagatcca catgcccgcg gccctggtgg ccaacctgtg cgacgacagg
 540
 tacaactggt gctaccacac agaggtgcag cggggcctgg acggccgcgt gctgtactgg
 600
 ccacgcggcc gcgtctgggg tggctcctca tccctcaatg ccatggtcta cgtccgtggg
 660
 cagcccgagg actacgagcg ctggcagcgc cagggcgccc gcggctggga ctacgcgcac
 720
 tgccctgcct acttccgcaa ggcgagggc cacngagctg ggccgcagcc ggtaccgggg
 780
 cgcgatggcc cgctgcgggt gtcccggggc aagaccaacc acccgctgca ctgcgcattc
 840
 ctggaggcca cgcagcaggc cggctacccg ctcaccgagg acatgaatgg cttccagcag
 900
 gagggcttcg gctggatgga catgaccatc catgaagg
 938

<210> 5326

<211> 234

<212> PRT

<213> Homo sapiens

<400> 5326

Met Trp Cys Leu Leu Arg Gly Leu Gly Arg Pro Gly Ala Leu Ala Arg
 1 5 10 15
 Gly Ala Leu Gly Gln Gln Gln Ser Leu Gly Ala Arg Ala Leu Ala Ser
 20 25 30
 Ala Gly Ser Glu Ser Arg Asp Glu Tyr Ser Tyr Val Val Val Gly Ala
 35 40 45
 Gly Ser Ala Gly Cys Val Leu Ala Gly Arg Leu Thr Glu Asp Pro Ala
 50 55 60
 Glu Arg Val Leu Leu Leu Glu Ala Gly Pro Lys Asp Val Arg Ala Gly
 65 70 75 80
 Ser Lys Arg Leu Ser Trp Lys Ile His Met Pro Ala Ala Leu Val Ala
 85 90 95
 Asn Leu Cys Asp Asp Arg Tyr Asn Trp Cys Tyr His Thr Glu Val Gln

```
<210> 5327
<211> 2084
<212> DNA
<213> Homo sapiens
```

4498

gtggagaacg gctctgcggt gtgtgtgtgc caggccggat acaccggagc agcctgcgag
 960
 atggatgtgg acgactgcag ccctgacccc tgcctgaatg gaggtctctg tgttgaccta
 1020
 gtggggaatt acacctgctt gtgtgccgag cccttcaagg gacttcgctg tgagacagga
 1080
 gaccatccag tgccacacgc ctgcctctcg gccccttgcc acaatggggg cacctgtgtg
 1140
 gatgcggacc agggctacgt gtgcgagtgc cccgaaggct tcatgggcct ggactgcagg
 1200
 gagagagtcn ncccgatgac tgtgagtgcc gcaacggagg cagatgcctg ggcgccaaca
 1260
 ccaccctctg cccatgcccc ctgcggannt tctttgggct tctctgtgaa tttgaaatca
 1320
 cagccantgc cctgcaacat gaacacacag tgcccagatg ggggctactg catggagcac
 1380
 ggcgggagct acctctgcgt ctgccacacc gaccacaatg ccagccactc cctgccatca
 1440
 ccctgcgact cggacccctg cttcaacgga ggctcctgcg atgcccatga cgactcctac
 1500
 acctgcgagt gcccgcgagg gttccacggc aagcactgcg agaaagcccc gccacacctg
 1560
 tgcagctcag ggccctgccg gaacgggggc acgtgcaagg aggcggggcg cgagtaccac
 1620
 tgcagctgcc cctaccgctt cactgggagg cactgtgaga tcgggaagcc agactcgtgt
 1680
 gcctctggcc cctgtcacia cggcggcacc tgcttcact acattggcaa atacaagtgt
 1740
 gactgtcccc caggcttctc cggcgggcac tgcgagatag cccctcccc ctgcttccg
 1800
 agcccggtgtg tgaatggggg cacctgcgag gaccgggaca cggatttctt ctgccactgc
 1860
 caagcagggt acatgggacg ccgatgccag gcagaggtgg actgcggccc cccggaggag
 1920
 gtgaagcacg ccacactgcg cttcaacggc acgcggctgg gcgcgggtggc cctgtatgca
 1980
 tgtgaccgtg gctacagcct gagcgcccc agccgcatcc gggctctgcca gccacacggt
 2040
 gtctggagtg agcctcccca gtgccttggt gattctgtgg gccc
 2084

<210> 5328

<211> 694

<212> PRT

<213> Homo sapiens

<400> 5328

Glu His Ser Gly Leu Tyr Val Asn Asn Asn Gly Ile Ile Ser Phe Leu
 1 5 10 15
 Lys Glu Val Ser Gln Phe Thr Pro Val Ala Phe Pro Ile Ala Lys Asp
 20 25 30
 Arg Cys Val Val Ala Ala Phe Trp Ala Asp Val Asp Asn Arg Arg Ala
 35 40 45
 Gly Asp Val Tyr Tyr Arg Glu Ala Thr Asp Pro Ala Met Leu Arg Arg

4500

485 490 495
 Asp Asp Ser Tyr Thr Cys Glu Cys Pro Arg Gly Phe His Gly Lys His
 500 505 510
 Cys Glu Lys Ala Arg Pro His Leu Cys Ser Ser Gly Pro Cys Arg Asn
 515 520 525
 Gly Gly Thr Cys Lys Glu Ala Gly Gly Glu Tyr His Cys Ser Cys Pro
 530 535 540
 Tyr Arg Phe Thr Gly Arg His Cys Glu Ile Gly Lys Pro Asp Ser Cys
 545 550 555 560
 Ala Ser Gly Pro Cys His Asn Gly Gly Thr Cys Phe His Tyr Ile Gly
 565 570 575
 Lys Tyr Lys Cys Asp Cys Pro Pro Gly Phe Ser Gly Arg His Cys Glu
 580 585 590
 Ile Ala Pro Ser Pro Cys Phe Arg Ser Pro Cys Val Asn Gly Gly Thr
 595 600 605
 Cys Glu Asp Arg Asp Thr Asp Phe Phe Cys His Cys Gln Ala Gly Tyr
 610 615 620
 Met Gly Arg Arg Cys Gln Ala Glu Val Asp Cys Gly Pro Pro Glu Glu
 625 630 635 640
 Val Lys His Ala Thr Leu Arg Phe Asn Gly Thr Arg Leu Gly Ala Val
 645 650 655
 Ala Leu Tyr Ala Cys Asp Arg Gly Tyr Ser Leu Ser Ala Pro Ser Arg
 660 665 670
 Ile Arg Val Cys Gln Pro His Gly Val Trp Ser Glu Pro Pro Gln Cys
 675 680 685
 Leu Gly Asp Ser Val Gly
 690

<210> 5329

<211> 2582

<212> DNA

<213> Homo sapiens

<400> 5329

nngggccgca acgtgtcgag agccgtaagt aaagtgtcgc aaagcagaag gaaggcggga
 60
 gtccccgactg caaacattga ggaaagccag gcagtagagg ccgctatggc gaacgttccg
 120
 tgggcagagg tctgcgagaa attccaggcg gcgctcgctc tgtcgcgggt ggaactgcat
 180
 aaaaatccgg agaaggaacc atacaagtcc aaatacagcg cccgggcgct actggaagag
 240
 gtcaaggcgc tgctcggccc tgcgcctgag gacgaggatg agcggcctga ggccgaggac
 300
 ggccccgggtg ccggtgacca cgccctgggg ctgccggctg aggtggtgga gcccgagggg
 360
 cccgtcgccc agcgagcggg gaggctggca gtcacgaggt tccacctcgg ggtgaaccac
 420
 atcgacacgg aggagctgtc ggcgggggag gagcacctgg tgaaatgcct gcggctgctg
 480
 cgcaggtacc ggctctcgca cgactgcac tctctctgca tccaggcgca gaataacctg
 540
 ggtatcttgt ggtctgaaag agaagaaatt gaaactgcac aggcttacct agagtcatca
 600

gaagcactat ataatcagta tatgaaagag gttgggagtc ctctcttga tcctactgag
660
cgttttcttc ctgaagaaga gaaacttact gaacaagaga gatcaaaaag atttgaaaag
720
gtttatactc ataacctata ttacctagct caagtctacc agcatctgga aatgtttgag
780
aaggctgctc actattgcca tagtacacta aaacgccagc ttgagcacia tgccaccat
840
cctatagagt gggctatcaa tgctgctacc ttgtcacagt ttacatcaa taagctatgc
900
tttatggagg ccaggcactg tttatcagct gctaattgtca tttttggtca aactggaaaag
960
atctcagcca cagaagacac tcctgaagct gaaggagaag tgccagagct ttatcatcaa
1020
agaaaggggg aaatagcaag gtgctggatc aaatactgtt tgactctcat gcagaatgcc
1080
caactctcca tgcaggacaa cataggagag cttgatcttg ataaacagtc tgaacttaga
1140
gctttaagga aaaaagaact agatgaggag gaaagcattc ggaaaaaagc tgtgcagttt
1200
ggaaccggtg aactgtgtga tgccatctct gcagtagaag agaaagtgag ctacttgaga
1260
cctttagatt ttgaagaagc cagagaactt ttcttattgg gtcagcacta tgtctttgag
1320
gcaaaagagt tctttcagat tgatgggttat gtcactgacc atattgaagt tgtccaagac
1380
cacagtgtc tgtttaaggt gcttgcatc tttgaaactg acatggagag acggtgcaag
1440
atgcataaac gcagaatagc catgctagag cccctaactg tagacctgaa tccacagtat
1500
tatctgttgg tcaacagaca gatccagttt gaaattgcac atgcttacta tgatatgatg
1560
gatttgaagg ttgccattgc tgacaggcta agggaccccg actcacacat tgtaaaaaaa
1620
ataaataatc ttaataagtc ggcactcaag tactaccagc tcttcctaga ctccctgaga
1680
gacccaaaca aagtctttcc tgagcacatc ggggaagacg tcctccgccc ggccatgtta
1740
gctaaattcc gggtagctcg tctgtatggc aaaatcatta ctgcagatcc caagaaagag
1800
ctggaaaatt tggcaacatc attggaacat taaaaattta ttgttgatta ctgtgaaaag
1860
catcctgagg ccgcccagga aatagaagtt gagctagaac ttagtaaaga gatggttagt
1920
cttctcccaa caaaaatgga gagattcaga accaagatgg ccctgactta atccttgttt
1980
ttaaagaaaag gaaatgtgca atattgaagt gatctttttc cctagtcaga caggcccaat
2040
tccattgtga tgtttacctt tatagccagg tgagtgcagt ttgaacttga gatacagtca
2100
actgagtgtt tgctaggatc ctaaggaaca taaagttaat taaaaactta cacctaatta
2160
tgtaaaattgc cttgttaaag acatgtgatt tgtatttttag atgcttgttt cctattaaaa
2220

tacagacatt tctaccctca gtttctaaat gtagactatt tggtggctag tacttgatag
 2280
 attccttgta agaaaaaatg ctgggtaatg tacctggtaa caagcctgtt aatatattaa
 2340
 gattgaaaaa gtaacttcta tagttactcc ttctaaaata tttgacttcc tacattcccc
 2400
 ccacccaaaa tctttccctt ttgaaaatac taaaaactaa gttatgttat tataaagtgt
 2460
 aaaatgggtt gtcttaatta taggagaaaa aggccttggt agaaataaaa taaactgact
 2520
 tatttcta atgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagaaaaa
 2580
 aa
 2582

<210> 5330

<211> 308

<212> PRT

<213> Homo sapiens

<400> 5330

Trp	Ile	Lys	Tyr	Cys	Leu	Thr	Leu	Met	Gln	Asn	Ala	Gln	Leu	Ser	Met
1				5				10						15	
Gln	Asp	Asn	Ile	Gly	Glu	Leu	Asp	Leu	Asp	Lys	Gln	Ser	Glu	Leu	Arg
		20					25						30		
Ala	Leu	Arg	Lys	Lys	Glu	Leu	Asp	Glu	Glu	Glu	Ser	Ile	Arg	Lys	Lys
	35					40					45				
Ala	Val	Gln	Phe	Gly	Thr	Gly	Glu	Leu	Cys	Asp	Ala	Ile	Ser	Ala	Val
	50				55					60					
Glu	Glu	Lys	Val	Ser	Tyr	Leu	Arg	Pro	Leu	Asp	Phe	Glu	Glu	Ala	Arg
65					70				75					80	
Glu	Leu	Phe	Leu	Leu	Gly	Gln	His	Tyr	Val	Phe	Glu	Ala	Lys	Glu	Phe
			85				90						95		
Phe	Gln	Ile	Asp	Gly	Tyr	Val	Thr	Asp	His	Ile	Glu	Val	Val	Gln	Asp
		100					105					110			
His	Ser	Ala	Leu	Phe	Lys	Val	Leu	Ala	Phe	Phe	Glu	Thr	Asp	Met	Glu
	115					120					125				
Arg	Arg	Cys	Lys	Met	His	Lys	Arg	Arg	Ile	Ala	Met	Leu	Glu	Pro	Leu
	130					135					140				
Thr	Val	Asp	Leu	Asn	Pro	Gln	Tyr	Tyr	Leu	Leu	Val	Asn	Arg	Gln	Ile
145				150					155					160	
Gln	Phe	Glu	Ile	Ala	His	Ala	Tyr	Tyr	Asp	Met	Met	Asp	Leu	Lys	Val
			165				170						175		
Ala	Ile	Ala	Asp	Arg	Leu	Arg	Asp	Pro	Asp	Ser	His	Ile	Val	Lys	Lys
		180					185					190			
Ile	Asn	Asn	Leu	Asn	Lys	Ser	Ala	Leu	Lys	Tyr	Tyr	Gln	Leu	Phe	Leu
	195					200						205			
Asp	Ser	Leu	Arg	Asp	Pro	Asn	Lys	Val	Phe	Pro	Glu	His	Ile	Gly	Glu
	210				215						220				
Asp	Val	Leu	Arg	Pro	Ala	Met	Leu	Ala	Lys	Phe	Arg	Val	Ala	Arg	Leu
225				230					235					240	
Tyr	Gly	Lys	Ile	Ile	Thr	Ala	Asp	Pro	Lys	Lys	Glu	Leu	Glu	Asn	Leu
			245				250							255	
Ala	Thr	Ser	Leu	Glu	His	Tyr	Lys	Phe	Ile	Val	Asp	Tyr	Cys	Glu	Lys

260 265 270
 His Pro Glu Ala Ala Gln Glu Ile Glu Val Glu Leu Glu Leu Ser Lys
 275 280 285
 Glu Met Val Ser Leu Leu Pro Thr Lys Met Glu Arg Phe Arg Thr Lys
 290 295 300
 Met Ala Leu Thr
 305

<210> 5331
 <211> 1069
 <212> DNA
 <213> Homo sapiens

<400> 5331
 aaatttgcac tagagtatcg cacaaccagg gaaagggttt tgcagcagaa acagaaacgg
 60
 gcccaaccaca gagagagaaa taagaccaga gggaagatga tcaccgattc tggcaagtcc
 120
 tccggcagtt ctccggcgcc cccaagccag ccgcagggtc tgagctatgc gngaggacgc
 180
 ggctgagcac gagaacatga aggctgtgct gaaaacctcg tccccctccg tggaggacgc
 240
 cccccccgcg ctgggcgtcc gcacacgcag ccgagcaagc cgnnaggatc cactagttcc
 300
 tggactatgg gaactgatga ctgcaccaat gtcacagatg atgcagctga tgagatcatg
 360
 gaccgcacgc tcaagtcagc cacccaagtg ccagtcagc gagtgggtgcc gaggagagag
 420
 aaacgatccc ggccaaccg gaaatctttg cgaagaaccc tgaagagcgg cctgacccca
 480
 gaagaagcca gagccctggg cttgggtggc acctcggagt tgcagctgtg acactcatag
 540
 gttactccca ggagtgtgct gagcagaagg caagctcttg ctggatgaaa cccctccagg
 600
 tgggggttggg gagacttgat attcacatcc aacagtttga aaaggagag ctcaattccc
 660
 agcgtcacc catggcttgt gttgcctgct acgcattgac ttggatctcc aggagtcacc
 720
 tgcacatacc ttctccatcg tgtcagctgt gtttctcttg attccgtgac acccggttta
 780
 ttagttcaaa agtgtgacac cttttctggg caaggaacag cccctttaag gagcaaatca
 840
 cttctgtcac agttattatg gtaatatgag gcaatctgat tagcttcaca gactgagtct
 900
 ccacaacacc aaaatatcca gatgtaaacc ccaaacttgt acacaaaaga aagcacagat
 960
 tgtttacctg ttgtggattt tagatgtaac aaatgtttat acaaatacat acatgtacac
 1020
 catgtttcaa atactaaata aatagagttt aatgccaaaa aaaaaaaaaa
 1069

<210> 5332
 <211> 61
 <212> PRT

<213> Homo sapiens

<400> 5332

Lys	Phe	Ala	Leu	Glu	Tyr	Arg	Thr	Thr	Arg	Glu	Arg	Val	Leu	Gln	Gln
1			5					10					15		
Lys	Gln	Lys	Arg	Ala	Asn	His	Arg	Glu	Arg	Asn	Lys	Thr	Arg	Gly	Lys
		20					25					30			
Met	Ile	Thr	Asp	Ser	Gly	Lys	Phe	Ser	Gly	Ser	Ser	Pro	Ala	Pro	Pro
	35					40						45			
Ser	Gln	Pro	Gln	Gly	Leu	Ser	Tyr	Ala	Xaa	Gly	Arg	Gly			
	50					55						60			

<210> 5333

<211> 883

<212> DNA

<213> Homo sapiens

<400> 5333

```

gagccgccgg gagctgtagt tctcccgagg tcaactggaag taggcagaga gcggacctgg
60
cggccgggca gcatggcggg gctggagctc ttgtcggacc agggctaccg ggtggacggg
120
cggcgcnngc gggagctgag caagatccag gcgcggatgg gcgtgttcgc gcaggctgac
180
ggctcgccct acattgagca gggcaacacc aaggcactgg ctgtggtcta cggcccgcac
240
gagatccggg gctcccgggc tcgagccctg ccggacaggg ccctagttaa ctgtcaatat
300
agttcagcga ccttcagcac aggtgagcgc aagcgacggc cacatgggga ccgtaagtcc
360
tgtgagatgg gctgcagct ccgccagact ttcgaagcag ccatactcac acagctgcac
420
ccacgtcccc agattgatat ctatgtgcag gtgctacagg cagatgggtg gacctatgca
480
gcttgtgtga atgcagccac gctggcagtg ctggatgccg ggatacccat gagagacttt
540
gtgtgtgcgt gctcagctgg ctctcgtggc ggcacagccc tggcggacct cagccatgtg
600
gaggaagcag ctggtggccc ccagctggcc ctggccctgc tgccagcctc aggacagatt
660
gcgctgcttg agatggatgc ccggtgcac gaggaccacc tggagcgggt gttggaggct
720
gctgcccagg ctgcccgaga tgtgcacacc ctcttagatc gagggtccg gcagcatgtg
780
cgtgaggcct ctatcttgct gggggactga ccaccagcc acccatgtcc agaataaaac
840
cctcctctgc ccacaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
883

```

<210> 5334

<211> 269

<212> PRT

<213> Homo sapiens

<400> 5334

Glu Pro Pro Gly Ala Val Val Leu Pro Arg Ser Leu Glu Val Gly Arg
 1 5 10 15
 Glu Arg Thr Trp Arg Pro Gly Ser Met Ala Gly Leu Glu Leu Leu Ser
 20 25 30
 Asp Gln Gly Tyr Arg Val Asp Gly Arg Arg Xaa Arg Glu Leu Arg Lys
 35 40 45
 Ile Gln Ala Arg Met Gly Val Phe Ala Gln Ala Asp Gly Ser Ala Tyr
 50 55 60
 Ile Glu Gln Gly Asn Thr Lys Ala Leu Ala Val Val Tyr Gly Pro His
 65 70 75 80
 Glu Ile Arg Gly Ser Arg Ala Arg Ala Leu Pro Asp Arg Ala Leu Val
 85 90 95
 Asn Cys Gln Tyr Ser Ser Ala Thr Phe Ser Thr Gly Glu Arg Lys Arg
 100 105 110
 Arg Pro His Gly Asp Arg Lys Ser Cys Glu Met Gly Leu Gln Leu Arg
 115 120 125
 Gln Thr Phe Glu Ala Ala Ile Leu Thr Gln Leu His Pro Arg Ser Gln
 130 135 140
 Ile Asp Ile Tyr Val Gln Val Leu Gln Ala Asp Gly Gly Thr Tyr Ala
 145 150 155 160
 Ala Cys Val Asn Ala Ala Thr Leu Ala Val Leu Asp Ala Gly Ile Pro
 165 170 175
 Met Arg Asp Phe Val Cys Ala Cys Ser Ala Gly Phe Val Asp Gly Thr
 180 185 190
 Ala Leu Ala Asp Leu Ser His Val Glu Glu Ala Ala Gly Gly Pro Gln
 195 200 205
 Leu Ala Leu Ala Leu Leu Pro Ala Ser Gly Gln Ile Ala Leu Leu Glu
 210 215 220
 Met Asp Ala Arg Leu His Glu Asp His Leu Glu Arg Val Leu Glu Ala
 225 230 235 240
 Ala Ala Gln Ala Ala Arg Asp Val His Thr Leu Leu Asp Arg Val Val
 245 250 255
 Arg Gln His Val Arg Glu Ala Ser Ile Leu Leu Gly Asp
 260 265

<210> 5335

<211> 4282

<212> DNA

<213> Homo sapiens

<400> 5335

gccggatcgg cggagggggcc gggccagggga gcctcagccc cgccggcagc cctaaggcga
 60
 aggtaaccgc cacgggggtcc ccgctcgcgac cccctccctc cgggagctcc cgtccccggg
 120
 atcccaagct ccgccccgcc gacccccgtc tcccctggac cccggctcta gcctgacgag
 180
 atccccaacc tcctgaggtg ctctggcccc ggattctccc gggctgcatt ctctgctcct
 240
 cctcgcctgc gaagcatcac gtccgcttcc cgacgctgag ggcagccccg tccagggcag
 300
 tggctctgcc aatgatcctg tgagtattca ggaatcactg ttgcccttgg ggatccttgt
 360

cctggagtgg cccacctgct tgccccagc atggcgctccg aactccccga gtcgctgatg
420
gccctctgta ctgacttctg cttgcgcaac ctggatggca ccctgggcta cctgctggac
480
aaggagaccc tgcggctaca tccggacatc ttcttgccca gcgagatctg tgaccggctc
540
gtcaatgagt atgtggagct ggtgaacgct gcctgtaact tcgagccaca cgagagcttc
600
ttcagcctct tttcggaccc ccgcagcacc cgctcacgc ggatccacct ccgtgaggac
660
ctggtgcagg accaggacct ggaggccatc cgcaagcagg acctggtgga gctgtacctg
720
actaactgcg agaagctgtc cgccaagagc ctgcagacac tgaggagctt cagccacacc
780
ctggtgtcct tgagcctctt cggctgtaca aacattttct atgaggagga gaaccaggg
840
ggctgtgaag atgagtacct cgtcaacccc acctgccagg tgctgggttaa ggatttcacc
900
ttcagaggct tcagccgcct ccgcttcctc aacttgggcc gcatgattga ttgggtccct
960
gtggagtccc tgctgcggcc gcttaactcc ctggctgcct tggacctctc aggcattcag
1020
acgagcgacg cagccttcct caccagtggt aaagacagcc tgggtgtccct cgtcctctac
1080
aacatggacc tgtccgacga ccacatccgg gtcacgtgc agctgcacaa gctgcgacac
1140
ctggacatct cccgagaccg cctctccagc tactacaagt tcaagctgac tcgggaggtg
1200
ctgagcctct ttgtgcagaa gctggggaac ctaatgtccc tggacatctc tggccacatg
1260
atcctagaga actgcagcat ctccaagatg gaagaggaag cggggcgagc cagcattgag
1320
ccttccaaga gcagcatcat acctttccgg gctctgaaga ggccgctgca gttcctcggg
1380
ctctttgaga actctctgtg ccgcctcacg cacattccag cctacaaagt aagtgggtgac
1440
aaaaacgaag agcagggtgt gaatgccatc gaggcctaca cggagcaccg gcctgagatc
1500
acctcgcggg ccatcaactt gctttttgac atcgcccga tcgagcggtg caaccagctg
1560
ctgcgggccc tgaagctggt catcacggcc ctcaagtgcc acaaatatga caggaaacatt
1620
caagtgcagc gcagcgccgc tctcttctac ctaacaaatt ccgagtaccg ctgagagcag
1680
agtgtgaagc tgcgccggca ggttatccag gtggtgctga atggcatgga atcctaccag
1740
gaggtgacgg tgcagcggaa ctgctgcctg acgctctgca acttcagcat ccccaggag
1800
ctggaattcc agtaccgccg ggtcaacgag ctctgtctca gcatcctcaa cccacgcgg
1860
caggacgagt ctatccagcg gatcgccgtg cacctgtgca atgccctggt ctgccaggta
1920
gacaacgacc acaaggaggc cgtgggcaag atgggctttg tcgtgacat gctgaagctg
1980

attcagaaga agctgctgga caagacatgt gaccagggtca tggagttctc ctggagtggc
2040
ctgtggaaca tcacagatga aactcctgac aactgcgaga tgttctctca tttcaacggc
2100
atgaagctct tcctggactg cctgaaggaa ttcccagaga agcaggaact gcataggaat
2160
atgctaggac ttttggggaa tgtggcgaaa gtgaaggagc tgaggcctca actaatgact
2220
tcccagttca tcagcgtctt cagcaacctg ttggagagca aggccgatgg gatcgaggtt
2280
tcctacaatg cctgcgggcg cctctccac atcatgtttg atggacccga ggcctggggc
2340
gtctgtgagc cccagcgtga ggaggtggag gaacgcatgt gggctgccat ccagagctgg
2400
gacataaact ctcggagaaa catcaattac aggtcatttg aaccaattct ccgcctcctt
2460
ccccagggaa tctctcctgt cagccagcac tgggcaacct gggccctgta taacctcgtg
2520
tctgtctacc cggacaagta ctgccctctg ctgatcaaag aaggggggat gcccttctg
2580
agggacataa ttaagatggc gaccgcacgg caggagacca aggaaatggc ccgcaagggtg
2640
attgagcact gcagtaactt taaagaggag aacatggaca cgtctagata gaggcctccg
2700
tccccatggc cgccaccgct ctggaccaca ggcggggagg aagcatgctc aagcagccca
2760
gcgggcgggc cccttccgag ggagcctccc acggagtgaag gagacatggg ggacttttgc
2820
acaaccgacg cttttcctta atgttagtga gatatatata tattatatat atatattttt
2880
tttttggtta ggaagtgtga agttttgtgt gtatgatttc tgtgcaaaaa caaaagcaac
2940
actcctgagt ccttgacgt tccttggcca ttctcaaacc cactcagcct tcctcgtga
3000
cacacacact cctaccccaa ccagactaaa tgcctataac gctgtgagtg tccagtcctt
3060
gtccaggaaa ctcagatccc ggcctggctt cctttcatga gaggagcagg ccttggacag
3120
cgtatcgagc atcctgaccc actgcccctg cctgagaacg ccatcttggc tcccgggcac
3180
agctgatggg gtttggggat tagaacttac ccactgggt ctcccaaaag ccttgggtgct
3240
cccggctgtg ggccatctgg ggcaggaaag tgagccattc ctaggctgag gtccaggcag
3300
ccctgcccct gaagaccctc taggagcagg gcacccagtg gccctgctgc tgtccagcca
3360
ggcctgctg aggccacgct gctatggagg ctgcctccta gtctcccacc aggtcccagg
3420
ctgtggaaaag ccccagccca gggatgggtca gaactcgggg gcagattcca ctgccccttc
3480
tgccaaacac atccagaacc tgccctcagc cctggaagct agcatcttct ggggcccagg
3540
gcttgcttcc tcgtccata gccctcaact gccaggcgc tcccaccagc agaactgagc
3600

ctgcctcctc ctcccagcct gccccgctgc ccagaggacc ccacgcctct cagaggcaga
 3660
 ggtcccatgc cagcctttga cccacaacgg ccacacagcc gcctccagac cagcactcgg
 3720
 actgcctcgc agtggccgct tgggctctcc tggcggtccc gccctgccct aggetttacc
 3780
 ttggaagcct gagaggcgcc ggctctcttg ctctccatc gatggacact gcattgcttc
 3840
 tcatcggaca cttgtggagc gcaggggcct ggggagcagc gctaaccctg gaggcagcct
 3900
 ttgggtgatg gctttttctt cctttttcct cccgcgggcc tgttttcagg tgttcctagc
 3960
 atttctgcct ccaggcagga cggcaggggt gaggagcttt gggagagaca cctggccttt
 4020
 ttctcctgga gcctctccct cccggccctg ggaagtgggc gcagccctgt gttccccag
 4080
 cttggcagat gggctgcatg cggcgctccc ttccttccca cgctcagcgg ccccggccag
 4140
 accctggcag acttcacacc tcattgcttt acccctggg gcctggggaa atgtctgtac
 4200
 tttgggaagt cacagaaata catttttgtg caaatggaa aaaaaaaaaa aaaaaaaaaa
 4260
 aaaaaaaaaa aaaaaaaaaa aa
 4282

<210> 5336

<211> 766

<212> PRT

<213> Homo sapiens

<400> 5336

Met	Ala	Ser	Asp	Thr	Pro	Glu	Ser	Leu	Met	Ala	Leu	Cys	Thr	Asp	Phe
1				5					10					15	
Cys	Leu	Arg	Asn	Leu	Asp	Gly	Thr	Leu	Gly	Tyr	Leu	Leu	Asp	Lys	Glu
			20						25				30		
Thr	Leu	Arg	Leu	His	Pro	Asp	Ile	Phe	Leu	Pro	Ser	Glu	Ile	Cys	Asp
			35				40					45			
Arg	Leu	Val	Asn	Glu	Tyr	Val	Glu	Leu	Val	Asn	Ala	Ala	Cys	Asn	Phe
	50					55				60					
Glu	Pro	His	Glu	Ser	Phe	Phe	Ser	Leu	Phe	Ser	Asp	Pro	Arg	Ser	Thr
65					70				75					80	
Arg	Leu	Thr	Arg	Ile	His	Leu	Arg	Glu	Asp	Leu	Val	Gln	Asp	Gln	Asp
			85					90					95		
Leu	Glu	Ala	Ile	Arg	Lys	Gln	Asp	Leu	Val	Glu	Leu	Tyr	Leu	Thr	Asn
			100				105					110			
Cys	Glu	Lys	Leu	Ser	Ala	Lys	Ser	Leu	Gln	Thr	Leu	Arg	Ser	Phe	Ser
		115					120				125				
His	Thr	Leu	Val	Ser	Leu	Ser	Leu	Phe	Gly	Cys	Thr	Asn	Ile	Phe	Tyr
	130					135				140					
Glu	Glu	Glu	Asn	Pro	Gly	Gly	Cys	Glu	Asp	Glu	Tyr	Leu	Val	Asn	Pro
145				150					155					160	
Thr	Cys	Gln	Val	Leu	Val	Lys	Asp	Phe	Thr	Phe	Glu	Gly	Phe	Ser	Arg
			165				170						175		
Leu	Arg	Phe	Leu	Asn	Leu	Gly	Arg	Met	Ile	Asp	Trp	Val	Pro	Val	Glu

4510

610	615	620
Ala Asp Gly Ile Glu Val Ser Tyr Asn Ala Cys Gly Val Leu Ser His		
625	630	635
Ile Met Phe Asp Gly Pro Glu Ala Trp Gly Val Cys Glu Pro Gln Arg		640
	645	650
Glu Glu Val Glu Glu Arg Met Trp Ala Ala Ile Gln Ser Trp Asp Ile		655
	660	665
Asn Ser Arg Arg Asn Ile Asn Tyr Arg Ser Phe Glu Pro Ile Leu Arg		670
	675	680
Leu Leu Pro Gln Gly Ile Ser Pro Val Ser Gln His Trp Ala Thr Trp		685
	690	695
Ala Leu Tyr Asn Leu Val Ser Val Tyr Pro Asp Lys Tyr Cys Pro Leu		700
705	710	715
Leu Ile Lys Glu Gly Gly Met Pro Leu Leu Arg Asp Ile Ile Lys Met		720
	725	730
Ala Thr Ala Arg Gln Glu Thr Lys Glu Met Ala Arg Lys Val Ile Glu		735
	740	745
His Cys Ser Asn Phe Lys Glu Glu Asn Met Asp Thr Ser Arg		750
	755	760
		765

<210> 5337

<211> 2742

<212> DNA

<213> Homo sapiens

<400> 5337

```

tttttatgga tatttagttt tatttgatac acttggatgc aactttactc attaccattt
60
ttaaaccat gtttaaaagt tttaaaattt gggtagaggc agaaggagaa ggtcgggttg
120
tagaagctgg ggtggccggc agctcgctca tcggtgttcg tgggctttgt cggtcctgac
180
ctcgtctctc tctggaaagg gagggaggct tcgacgtcga gagggagccg ctgccgcgtt
240
agttccgagc ttgaagtcac taggacttct ctcaaacttg tgtgctgagg agactcagat
300
gttggcctca gctcctaggc tgaactcagc agatcggccc atgaaaactt ctgtattgag
360
acaaaggaag ggatctgtca gaaagcaaca cttgttatct tgggcttggc agcaaggaag
420
aggacaggta gtggagatcc tgcaatctga aaagcagact gaaagggtgac aaagaagctg
480
aagatgggtg gtggagagag gtataacatt ccagcccctc aatctagaaa tgttagtaag
540
aaccaacaac agcttaacag acagaagacc aaggaacaga attcccagat gaagattggt
600
cataagaaaa aagaaagagg acatgggttat aactcatcag cagctgcctg gcaggccatg
660
caaatgggg ggaagaacaa aaattttcca aataatcaaa gttggaattc tagcttatca
720
ggccccaggt tactttttta atctcaagct aatcagaact atgctggtgc caaatttagt
780
gagccgcat caccaagtgt tcttcccaaa ccaccaagcc actgggtccc tgtttccttt
840

```

aatccttcag ataaggaaat aatgacattt caacttaaaa ccttacttaa agtacaggta
900
taaaataaga caaatgttta aatttagtta tgttcacgga tagttgtcaa ttggtctgaa
960
acaaattcgc tagggaatct atttgtgtag aactaattaa tgtaaaaaaa acagaccatc
1020
tcgtgttggtg tgcactgtga tataatggta gtatcagtgc aacttaaaact aatgattgta
1080
cttgatatta agtgttctca actgagtaac ttttaagtgg aaaccaagtt tagatttggg
1140
gagtggtaaa ggaatcagct ttttctattg ttagggggaag acagtaattt atcattcatg
1200
gaccagtaga ttgttgaaag ttggtgaatc ggattataag cttctagcta acacaaggat
1260
tcagaattag gtaaaccatct gaaggtttag tatattagaa acacccaaac cagtaatatg
1320
ctaacctgat gcaactgctga aagaaaatgt gaatttttcg taataattgc attttagtga
1380
attgtacagt ggggtgaaag ggcatttggg gctcattaga atgagacata gtacacccca
1440
atggccctgt ttattaaatg tagtggatta agtgtctgtc aacaaataca ccaaaccat
1500
tttttataga aacagtattt aatggctact caatagcttt caaaatacat ttttgtatta
1560
cagcactgca caagctattc taatagtgtc ctggcctcat cattcctgca aagcttgctt
1620
tggggagttg gataatgtga aaattttaag tacctagggg agaaagagcc atgtaaatat
1680
ctgtaataaa cttgtagcat atgtaaagtt ttcttggcct ttatcttaca aaaatggagt
1740
attttagtat gaatttgctg aatgtaagac cgtggactgt tttttataat atggccta
1800
tttaaaggtc caaaataact tgtttttaaa gtttgccctt gtgctaaagt gccagtgtat
1860
gtatgttata cttgatttgg ttgtaaaacta ttttcaaag taaaccctag tgtaataagt
1920
tttataacta aaaagggtgc ttcacattca tatcatgtac attaagtact acataaactt
1980
gtcttttaggc tatcaatatt taacttgggc agtacttcat cttgatttat ttggagaaat
2040
acagcttagg catctgctta cctgcttagg catcaagagg tgccaaatta gaaaataggg
2100
cattaacaat caaaattttt aagctgaccc acatacttgc tactggtttc gcttatgttt
2160
aagcatttaa agttggcaaa acatgttatc aatgtattat gcaagagttt acatcttttg
2220
cataagtggg ccattgggtt gcacctaccc cttgaccaa caaaaacaaa acatcactgg
2280
caccatactc gaaactacct gtatcctagg ttataagatt gtgaaagcca acaatctata
2340
aggttggagg gactctagtt aatctttggg cttagaggag gaaaaaaga tagtcccata
2400
ctgcatttca catctcttaa aaatagtttt agcagcttaa accttttttag ttataaaact
2460

tattacacta gggtttactt tgaaatatag ttacacaacca aatcaagtat aacatacata
 2520
 cactggcact ttagcacaag ggcaaaacttt aaaaacaagt tattttggac ctttaaaatt
 2580
 aggccatatt ataaaaaaca gtccacgggc ttacattcag caaattcata ctaaaatact
 2640
 ccatttttgt aagataaagg ccaagaaaac ttacatatg ctacaagttt attacagata
 2700
 ttacatggc tctttctccc ctaaggactt aaaattttca ca
 2742

<210> 5338

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5338

Met	Gly	Gly	Gly	Glu	Arg	Tyr	Asn	Ile	Pro	Ala	Pro	Gln	Ser	Arg	Asn
1				5					10					15	
Val	Ser	Lys	Asn	Gln	Gln	Gln	Leu	Asn	Arg	Gln	Lys	Thr	Lys	Glu	Gln
			20					25					30		
Asn	Ser	Gln	Met	Lys	Ile	Val	His	Lys	Lys	Lys	Glu	Arg	Gly	His	Gly
		35					40					45			
Tyr	Asn	Ser	Ser	Ala	Ala	Ala	Trp	Gln	Ala	Met	Gln	Asn	Gly	Gly	Lys
	50					55				60					
Asn	Lys	Asn	Phe	Pro	Asn	Asn	Gln	Ser	Trp	Asn	Ser	Ser	Leu	Ser	Gly
65					70					75				80	
Pro	Arg	Leu	Leu	Phe	Lys	Ser	Gln	Ala	Asn	Gln	Asn	Tyr	Ala	Gly	Ala
			85						90					95	
Lys	Phe	Ser	Glu	Pro	Pro	Ser	Pro	Ser	Val	Leu	Pro	Lys	Pro	Pro	Ser
			100					105				110			
His	Trp	Val	Pro	Val	Ser	Phe	Asn	Pro	Ser	Asp	Lys	Glu	Ile	Met	Thr
		115					120					125			
Phe	Gln	Leu	Lys	Thr	Leu	Leu	Lys	Val	Gln	Val					
		130					135								

<210> 5339

<211> 847

<212> DNA

<213> Homo sapiens

<400> 5339

nngacacttt gagttactta taatagtgt tactataaga tataaagcag tcataattac
 60
 ctaagcttca aaaatctttt gtttccatgt ccagagacaa gtacagtaca gtattcttat
 120
 ttgtttgctc ccccttttta aaatatattaa tagcttatgt tcacttctca tagctccttt
 180
 ctttatgaaa aataacatga aaatagaaaa gttgttctaa gtatactttt tgtatatatt
 240
 ctgacttat cagatgtaga cttcctagat gattcttcaa cggagagttt gcttctgagt
 300
 ggggatgaat acaatcagga ctttgattca accaattttg aggaatctca ggatgaggat
 360

gatgctctta atgaaattgt gcgatgtatt tgtgagatgg atgaggagaa tggcttcatg
 420
 atccagtgtg aagagtgcctt gtgttggcaa cacagcgtgt gcatggggct gctggaggag
 480
 agcattccag agcagtacat ctgctatatc tgccgggacc caccaggtca gaggtggagt
 540
 gcaaaatatc gttatgataa ggagtgggtg aataatggga gaatgtgagg gttatcattt
 600
 ttcaaagaaa attattctca tctcaatgcc aaaaagatag tttctacaca tcacctgctt
 660
 gctgatgtct atggtgttac agaagtgcta cacgggctac agctgaagat tggaatacta
 720
 aagaataaac atcatcctga ccttcatctc tgggcttgtt ccgggaagcg aaaagaccaa
 780
 gatcaaataa tagctggggg ggagaaaaaa atagctcaag acacagttaa tcgagaagaa
 840
 aaaaaaa
 847

<210> 5340

<211> 217

<212> PRT

<213> Homo sapiens

<400> 5340

His	Glu	Asn	Arg	Lys	Val	Val	Leu	Ser	Ile	Leu	Phe	Val	Tyr	Ile	Leu
1				5					10					15	
Asp	Leu	Ser	Asp	Val	Asp	Phe	Leu	Asp	Asp	Ser	Ser	Thr	Glu	Ser	Leu
			20					25					30		
Leu	Leu	Ser	Gly	Asp	Glu	Tyr	Asn	Gln	Asp	Phe	Asp	Ser	Thr	Asn	Phe
	35						40					45			
Glu	Glu	Ser	Gln	Asp	Glu	Asp	Asp	Ala	Leu	Asn	Glu	Ile	Val	Arg	Cys
	50					55					60				
Ile	Cys	Glu	Met	Asp	Glu	Glu	Asn	Gly	Phe	Met	Ile	Gln	Cys	Glu	Glu
65					70				75					80	
Cys	Leu	Cys	Trp	Gln	His	Ser	Val	Cys	Met	Gly	Leu	Leu	Glu	Glu	Ser
			85					90					95		
Ile	Pro	Glu	Gln	Tyr	Ile	Cys	Tyr	Ile	Cys	Arg	Asp	Pro	Pro	Gly	Gln
		100						105					110		
Arg	Trp	Ser	Ala	Lys	Tyr	Arg	Tyr	Asp	Lys	Glu	Trp	Leu	Asn	Asn	Gly
	115						120					125			
Arg	Met	Cys	Gly	Leu	Ser	Phe	Phe	Lys	Glu	Asn	Tyr	Ser	His	Leu	Asn
	130					135					140				
Ala	Lys	Lys	Ile	Val	Ser	Thr	His	His	Leu	Leu	Ala	Asp	Val	Tyr	Gly
145					150					155					160
Val	Thr	Glu	Val	Leu	His	Gly	Leu	Gln	Leu	Lys	Ile	Gly	Ile	Leu	Lys
			165					170					175		
Asn	Lys	His	His	Pro	Asp	Leu	His	Leu	Trp	Ala	Cys	Ser	Gly	Lys	Arg
		180					185					190			
Lys	Asp	Gln	Asp	Gln	Ile	Ile	Ala	Gly	Val	Glu	Lys	Lys	Ile	Ala	Gln
	195					200						205			
Asp	Thr	Val	Asn	Arg	Glu	Glu	Lys	Lys							
	210					215									

<210> 5341

<211> 2455

<212> DNA

<213> Homo sapiens

<400> 5341

nnatgagctg caggtacggt ccggaatccc gggcgcaccc acgcgtccgg ctctagggga
60
ggagctggta ccatgggtgt caggcaacag ttggccttgc tgctgctgct gctgctcctg
120
ctctggggcc tggggcagcc agtgtggcca gtcgctgtgg ccttgaccct gcgctggctc
180
ctgggggatc ccacatgttg cgtgctactt gggctggcca tgtagcacg gccctggctc
240
ggcccttggg tgcccatgg gctgagcctg gcagctgcgg ccctggcact aaccctcctg
300
ccagcacggc tgccccagg actacgctgg ctgccggctg atgtgatctt cttggccaag
360
atcctccacc tgggcctgaa gatcagggga tgcttgagcc ggcagccgcc tgacacctt
420
gtagatgcct tcgagcggcg agcacgagcg cagcctggca gggcactctt ggtgtggacg
480
gggcctgggg ccggctcagt cacctttggt gagctggatg cccgggcctg ccaggcggca
540
tgggccctga aggtgagct gggtgaccct gcgagcctgt gtgccgggga gcctactgcc
600
ctccttgtgc tggcttcca ggccgtcca gccctgtgta tgtggctggg gctggccaag
660
ctgggtgcc caacagcctg gatcaaccgg catggccggg ggatgccctt ggcgcactct
720
gtgctgagct ctggggcccg ggtgctggtg gtggaccag acctccggga gagcctggag
780
gagatccttc ccaagctgca ggctgagaac atccgctgct tctacctcag ccatacctcc
840
cctacaccag ggggtggggc tctgggggct gccctggatg cagcgcctc ccaccagt
900
cctgctgacc tgctgctgg gatcacatgg agaagccctg ccctcttcat ctatacctc
960
gggaccactg gcctccgaa gccagccatc ctcacgcatg agcgggtact gcagatgagc
1020
aagatgctgt ccttatctgg ggccacagct gatgatgtgg ttacacggc cctgcctctg
1080
taccacgtga tgggacttgt cgttgggac ctcggtgct tagatctcgg agccacctgt
1140
gttctggccc ccaagtctc tacttctgc ttctgggatg actgtcgga gcatggcgtg
1200
acagtgatcc tgtatgtggg cgagctcctg cggctactgt gtaacattcc ccagcaacca
1260
gaggaccgga cacatacagt ccgcctggca atgggcaatg gactacgggc tgatgtgtgg
1320
gagaccttc agcagcgtt cggctctatt cggatctggg aagtctacgg ctccacagaa
1380
ggcaacatgg gcttagtcaa ctatgtgggg cgctgcgggg ccctgggcaa gatgagctgc
1440

ctctccgaa tgctgtcccc ctttgagctg gtgcagttcg acatggaggc ggcggagcct
 1500
 gtgagggaca atcagggcctt ctgcatccct gtagggctag gggagccggg gctgctgctg
 1560
 accaaggtgg taagccagca acccttcgtg ggctaccgcg gccccgaga gctgtcggaa
 1620
 cggaagctgg tgcgcaacgt gcggcaatcg ggcgacgttt actacaacac cggggacgta
 1680
 ctggccatgg accgcgaagg cttcctctac ttccgcgacc gcctcgggga caccttcgga
 1740
 tggaaggcg agaactgtgc cagcacgag gtggaggcg tgtgtcgca ggtggacttc
 1800
 ttgcaacagg ttaactgtga tggcgtgtgc gtgccagggt gtgagggtaa ggtgggcatg
 1860
 gctgctgtgc agctagcccc cgccagact ttcgacgggg agaagttgta ccagcacgtt
 1920
 cgcgcttggc tccctgecta cgctaccccc catttcatcc gcatccagga cgccatggag
 1980
 gtcaccagca cgttcaaact gatgaagacc cggttggtgc gtgagggcct caatgtgggg
 2040
 atcgtggttg accctctgtt tgtactggac aaccggggccc agtccttcg gccctgacg
 2100
 gcagaaatgt accaggtgt gtgtgagggg acctggaagc tctgatcacc tggccaaccc
 2160
 actggggtag gggtagggat caaagccagc cccccacc ccaacacact cgggtgtcct
 2220
 ttcactctgg gcctgtgtga atcccagcct ggccataccc tcaacctcag tgggctggaa
 2280
 atgacagtgg gccctgtagc agtggcagaa taaactcaga tgtgttcaca aaaaaaaca
 2340
 cgcacgaggt ggagggcgtg ttgtcgcagg tggacttctt gcaacagggt aacgtgtatg
 2400
 gcgtgtgctg gccaggtgt gagggtaagg tgggcatggc tgctgtgcag ctacg
 2455

<210> 5342

<211> 690

<212> PRT

<213> Homo sapiens

<400> 5342

Met Gly Val Arg Gln Gln Leu Ala Leu Leu Leu Leu Leu Leu Leu
 1 5 10 15
 Leu Trp Gly Leu Gly Gln Pro Val Trp Pro Val Ala Val Ala Leu Thr
 20 25 30
 Leu Arg Trp Leu Leu Gly Asp Pro Thr Cys Cys Val Leu Leu Gly Leu
 35 40 45
 Ala Met Leu Ala Arg Pro Trp Leu Gly Pro Trp Val Pro His Gly Leu
 50 55 60
 Ser Leu Ala Ala Ala Ala Leu Thr Leu Leu Pro Ala Arg Leu
 65 70 75 80
 Pro Pro Gly Leu Arg Trp Leu Pro Ala Asp Val Ile Phe Leu Ala Lys
 85 90 95
 Ile Leu His Leu Gly Leu Lys Ile Arg Gly Cys Leu Ser Arg Gln Pro

100	105	110
Pro Asp Thr Phe Val Asp Ala Phe Glu Arg Arg Ala Arg Ala Gln Pro		
115	120	125
Gly Arg Ala Leu Leu Val Trp Thr Gly Pro Gly Ala Gly Ser Val Thr		
130	135	140
Phe Gly Glu Leu Asp Ala Arg Ala Cys Gln Ala Ala Trp Ala Leu Lys		
145	150	155
Ala Glu Leu Gly Asp Pro Ala Ser Leu Cys Ala Gly Glu Pro Thr Ala		
165	170	175
Leu Leu Val Leu Ala Ser Gln Ala Val Pro Ala Leu Cys Met Trp Leu		
180	185	190
Gly Leu Ala Lys Leu Gly Cys Pro Thr Ala Trp Ile Asn Pro His Gly		
195	200	205
Arg Gly Met Pro Leu Ala His Ser Val Leu Ser Ser Gly Ala Arg Val		
210	215	220
Leu Val Val Asp Pro Asp Leu Arg Glu Ser Leu Glu Glu Ile Leu Pro		
225	230	235
Lys Leu Gln Ala Glu Asn Ile Arg Cys Phe Tyr Leu Ser His Thr Ser		
245	250	255
Pro Thr Pro Gly Val Gly Ala Leu Gly Ala Ala Leu Asp Ala Ala Pro		
260	265	270
Ser His Pro Val Pro Ala Asp Leu Arg Ala Gly Ile Thr Trp Arg Ser		
275	280	285
Pro Ala Leu Phe Ile Tyr Thr Ser Gly Thr Thr Gly Leu Pro Lys Pro		
290	295	300
Ala Ile Leu Thr His Glu Arg Val Leu Gln Met Ser Lys Met Leu Ser		
305	310	315
Leu Ser Gly Ala Thr Ala Asp Asp Val Val Tyr Thr Val Leu Pro Leu		
325	330	335
Tyr His Val Met Gly Leu Val Val Gly Ile Leu Gly Cys Leu Asp Leu		
340	345	350
Gly Ala Thr Cys Val Leu Ala Pro Lys Phe Ser Thr Ser Cys Phe Trp		
355	360	365
Asp Asp Cys Arg Gln His Gly Val Thr Val Ile Leu Tyr Val Gly Glu		
370	375	380
Leu Leu Arg Tyr Leu Cys Asn Ile Pro Gln Gln Pro Glu Asp Arg Thr		
385	390	395
His Thr Val Arg Leu Ala Met Gly Asn Gly Leu Arg Ala Asp Val Trp		
405	410	415
Glu Thr Phe Gln Gln Arg Phe Gly Pro Ile Arg Ile Trp Glu Val Tyr		
420	425	430
Gly Ser Thr Glu Gly Asn Met Gly Leu Val Asn Tyr Val Gly Arg Cys		
435	440	445
Gly Ala Leu Gly Lys Met Ser Cys Leu Leu Arg Met Leu Ser Pro Phe		
450	455	460
Glu Leu Val Gln Phe Asp Met Glu Ala Ala Glu Pro Val Arg Asp Asn		
465	470	475
Gln Gly Phe Cys Ile Pro Val Gly Leu Gly Glu Pro Gly Leu Leu Leu		
485	490	495
Thr Lys Val Val Ser Gln Gln Pro Phe Val Gly Tyr Arg Gly Pro Arg		
500	505	510
Glu Leu Ser Glu Arg Lys Leu Val Arg Asn Val Arg Gln Ser Gly Asp		
515	520	525
Val Tyr Tyr Asn Thr Gly Asp Val Leu Ala Met Asp Arg Glu Gly Phe		

530 535 540
 Leu Tyr Phe Arg Asp Arg Leu Gly Asp Thr Phe Arg Trp Lys Gly Glu
 545 550 555 560
 Asn Val Ser Thr His Glu Val Glu Gly Val Leu Ser Gln Val Asp Phe
 565 570 575
 Leu Gln Gln Val Asn Val Tyr Gly Val Cys Val Pro Gly Cys Glu Gly
 580 585 590
 Lys Val Gly Met Ala Ala Val Gln Leu Ala Pro Gly Gln Thr Phe Asp
 595 600 605
 Gly Glu Lys Leu Tyr Gln His Val Arg Ala Trp Leu Pro Ala Tyr Ala
 610 615 620
 Thr Pro His Phe Ile Arg Ile Gln Asp Ala Met Glu Val Thr Ser Thr
 625 630 635 640
 Phe Lys Leu Met Lys Thr Arg Leu Val Arg Glu Gly Phe Asn Val Gly
 645 650 655
 Ile Val Val Asp Pro Leu Phe Val Leu Asp Asn Arg Ala Gln Ser Phe
 660 665 670
 Arg Pro Leu Thr Ala Glu Met Tyr Gln Ala Val Cys Glu Gly Thr Trp
 675 680 685
 Lys Leu
 690

<210> 5343

<211> 752

<212> DNA

<213> Homo sapiens

<400> 5343

tctagaagcc tgcggcaagg tcgcctctac cggcagccca agttcctgcg gacgatggac
 60
 gtgttcgaca tggaacaggg gggatggctg aagatggaac gatcgttctt cctcaagaag
 120
 cggcgggcag attttgtggc tggctctctg agtggacggg tcatagtggc tgggggactt
 180
 gggaatcaac ccactgtcct ggagacggcg gaagcattcc acccagggaa gaacaaatgg
 240
 gagatcctcc ctgccatgcc cacaccccg cgtgcctgct ccagcatagt cgtcaagaac
 300
 tgcctcctcg ctgtgggagg tgtcaaccag ggtctgagtg acgcagtggg ggcctgtgt
 360
 gtctctgact cctagctgtc tctgggctca gtacctttgc cctggaccat atcacttcac
 420
 tcttaacatg aggaatgatc ttgtccaagc agtcggggct acttccaaga atgtcagctc
 480
 ctgtagcaa ccagtggagt ctggccttgg ggtctaaagt tgacctctct atagctccaa
 540
 atcctaccaa tctcagaaaa ctgtaagagg cacagatgac tccaccagct gcagagctga
 600
 ctctgaagag agtcttcact tactgcacag gcaaagaaag gcacaggaat atttctacc
 660
 tctccctcct gtgagtccca cctcccccca ccccatctc caggaggcag gtagagcagt
 720
 tctgaccgag aggatagact gctgttgctg tc
 752

<210> 5344
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 5344
 Ser Arg Ser Leu Arg Gln Gly Arg Leu Tyr Arg Gln Pro Lys Phe Leu
 1 5 10 15
 Arg Thr Met Asp Val Phe Asp Met Glu Gln Gly Gly Trp Leu Lys Met
 20 25 30
 Glu Arg Ser Phe Phe Leu Lys Lys Arg Arg Ala Asp Phe Val Ala Gly
 35 40 45
 Ser Leu Ser Gly Arg Val Ile Val Ala Gly Gly Leu Gly Asn Gln Pro
 50 55 60
 Thr Val Leu Glu Thr Ala Glu Ala Phe His Pro Gly Lys Asn Lys Trp
 65 70 75 80
 Glu Ile Leu Pro Ala Met Pro Thr Pro Arg Cys Ala Cys Ser Ser Ile
 85 90 95
 Val Val Lys Asn Cys Leu Leu Ala Val Gly Gly Val Asn Gln Gly Leu
 100 105 110
 Ser Asp Ala Val Glu Ala Leu Cys Val Ser Asp Ser
 115 120

<210> 5345
 <211> 1912
 <212> DNA
 <213> Homo sapiens

<400> 5345
 nnctagaatt cagcggccgc tgaattctag gcggcgccgc ggcgacggag caccggcggc
 60
 ggcagggcga gaggattaaa tgaaagcaaa agagttaata atggcaacac ggctccagaa
 120
 gactcttccc ctgccaagaa aactcgtaga tgccagagac aggagtcgaa aaagatgcct
 180
 gtggctggag gaaaagctaa taaggacagg acagaagaca agcaagatgg tatgccagga
 240
 aggtcatggg ccagcaaaaag ggtctctgaa tctgtgaagg ccttgctgtt aaagggcaaa
 300
 gctcctgtgg acccagagtg tacagccaag gtggggaagg ctcatgtgta ttgtgaagga
 360
 aatgatgtct atgatgtcat gctaaatcag accaatctcc agttcaacaa caacaagtac
 420
 tatctgattc agctattaga agatgatgcc cagaggaact tcagtgtttg gatgagatgg
 480
 ggccgagttg ggaaaatggg acagcacagc ctgggtggctt gtccaggcaa tctcaacaag
 540
 gccaaagaaa tctttcagaa gaaattcctt gacaaaacga aaaacaattg ggaagatcga
 600
 gaaaagtttg agaaggtgcc tggaaaatat gatatgctac agatggacta tgccaccaat
 660
 actcaggatg aagaggaaac aaagaaagag gaatctctta aatctccctt gaagccagag
 720

tcacagctag atcttcgggt acaggagtta ataaagttga tctgtaatgt tcaggccatg
 780
 gaagaaatga tgatggaaat gaagtataat accaagaaag cccacttgga gaagctgaca
 840
 gtggcacaaa tcaaggcagg ttaccagtct cttaagaaga ttgaggattg tattcgggct
 900
 ggccagcatg gacgagctct catggaagca tgcaatgaat totacaccag gattccgcat
 960
 gactttggac tccgtactcc tccactaatc cggacacaga aggaactgtc agaaaaata
 1020
 caattactag aggctttggg agacattgaa attgctatta agctgggtgaa aacagagcta
 1080
 caaagcccag aacacccatt ggaccaacac tatagaaacc tacattgtgc cttgcgcccc
 1140
 cttgaccatg aaagttacga gttcaaagtg atttcccagt acctacaatc taccatgct
 1200
 cccacacaca gcgactatac catgaccttg ctggatttgt ttgaagtgga gaaggatggg
 1260
 gagaaagaag ccttcagaga ggaccttcac aacaggatgc ttctatggca tggttccagg
 1320
 atgagtaact ggggtgggaat cttgagccat gggcttcgaa ttgccccacc tgaagctccc
 1380
 atcacagggt acatgtttgg gaaaggaatc tactttgctg acatgtcttc caagagtgcc
 1440
 aattactgct ttgcctctcg cctaaagaat acaggactgc tgctcttacc agaggtagct
 1500
 ctaggtcagt gtaatgaact actagaggcc aatcctaagg ccgaaggatt gcttcaagg
 1560
 aaacatagca ccaaggggct gggcaagatg gctcccagtt ctgcccactt cgtcaccctg
 1620
 aatgggagta cagtgccatt aggaccagca agtgacacag gaattctgaa tccagatggg
 1680
 tataccctca actacaatga atatattgta tataacccca accagggtccg tatgcggtac
 1740
 cttttaaagg ttcagtttaa tttccttcag ctgtggtgaa tgttgatatt aaataaacca
 1800
 gagatctgat cttcaagcaa gaaaataagc agtggtgtac ttgtgaattt tgtgatattt
 1860
 tatgtaataa aaactgtaca ggtctaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1912

<210> 5346

<211> 534

<212> PRT

<213> Homo sapiens

<400> 5346

Met	Pro	Val	Ala	Gly	Gly	Lys	Ala	Asn	Lys	Asp	Arg	Thr	Glu	Asp	Lys
1				5				10					15		
Gln	Asp	Gly	Met	Pro	Gly	Arg	Ser	Trp	Ala	Ser	Lys	Arg	Val	Ser	Glu
			20					25					30		
Ser	Val	Lys	Ala	Leu	Leu	Leu	Lys	Gly	Lys	Ala	Pro	Val	Asp	Pro	Glu
			35				40					45			
Cys	Thr	Ala	Lys	Val	Gly	Lys	Ala	His	Val	Tyr	Cys	Glu	Gly	Asn	Asp

4521

```
<210> 5347<211> 2893
<212> DNA
<213> Homo sapiens
```

4522

tatcatgtaa acttcagcca ggctataagt caggatgtga atcttcatga ggccatcttg
1260
ctttgtccca acaatacatt tagaagagat ccaacagcaa ggacttcaca gtcacaagaa
1320
ccatttctgc agttaaattc tcataccacc aatcctgagc aaacccttcc tggaactaat
1380
ttgacaggat ttctttcacc ggttgacaat catatgagga atctaacaag ccaagaccta
1440
ctgtatgacc ttgacataaa tatatttgat gagataaact taatgtcatt ggccacagaa
1500
gacaactttg atccaatcga tgtttctcag ctttttgatg aatcagattc tgattctggc
1560
ctttcttttag attcaagtca caataatacc tctgtcatca agtctaattc ctctcactct
1620
gtgtgtgatg aagggtctat aggttattgc actgaccatg aatctagttc ccatcatgac
1680
ttagaagggtg ctgtaggtgg ctactacca gaaccagta agctttgtca cttggatcaa
1740
agtgattctg atttccatgg agatcttaca tttcaacacg tatttcataa ccacacttac
1800
cacttacagc caactgcacc agaattctact tctgaacctt ttccgtggcc tgggaagtca
1860
cagaagataa ggagtagata ccttgaagac acagatagaa acttgagccg tgatgaacag
1920
cgtgctaaag ctttgcatat ccctttttct gtagatgaaa ttgtcggcat gcctgttgat
1980
tctttcaata gcatgttaag tagatattat ctgacagacc tacaagtctc acttatccgt
2040
gacatcagac gaagagggaa aaataaagtt gctgcgaga actgtcgtaa acgcaaattg
2100
gacataattt tgaatttaga agatgatgta tgtaacttgc aagcaaagaa ggaaactctt
2160
aagagagagc aagcacaatg taacaaagct attaacataa tgaaacagaa actgcatgac
2220
ctttatcatg atatttttag tagattaaga gatgaccaag gtaggccagt caatcccaac
2280
cactatgctc tccagtgtac ccatgatgga agtatcttga tagtaccxaa agaactggtg
2340
gcctcaggcc aaaaaagga aacccaaaag ggaaagagaa agtgagaaga aactgaagat
2400
ggactctatt atgtgaagta gtaatgttca gaaactgatt atttgatca gaaaccattg
2460
aaactgcttc aagaattgta tctttaagta ctgctacttg aataactcag ttaacgctgt
2520
tttgaagctt acatggacaa atgttttaga cttcaagatc acacttggtg gcaatctggg
2580
ggagccacaa cttttcatga agtgcattgt atacaaaatt catagttagt tccaaagaat
2640
agggttaacat gaaaaccag taagactttc catcttgga gccatccttt ttaagagtaa
2700
gttggttact tcaaaaagag caaacactgg ggatcaaatt attttaagag gtatttcagt
2760
tttaaagca aaatagcctt attttcattt agtttgtag cactatagtg agcttttcaa
2820

acactatttt aatctttata tttaacttat aaattttgct ttctatggaa ataaattttg
 2880
 tatttgtatt aaa
 2893

<210> 5348
 <211> 694
 <212> PRT
 <213> Homo sapiens

<400> 5348
 Met Lys His Leu Lys Arg Trp Trp Ser Ala Gly Gly Gly Leu Leu His
 1 5 10 15
 Leu Thr Leu Leu Leu Ser Leu Ala Gly Leu Arg Val Asp Leu Asp Leu
 20 25 30
 Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe
 35 40 45
 Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala
 50 55 60
 Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu
 65 70 75 80
 Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg
 85 90 95
 Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu
 100 105 110
 Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu
 115 120 125
 Gly Ala Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp
 130 135 140
 Gly Gly Ser Gln Ala Val Gln Gly Gly Cys Gly Asp Ser Arg Ala Ala
 145 150 155 160
 Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Glu Lys Ala Pro Ala Glu
 165 170 175
 Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn
 180 185 190
 Gly Val Leu Arg Glu Lys His Glu Ala Val Asp His Ser Ser Gln His
 195 200 205
 Glu Glu Asn Glu Glu Arg Val Ser Ala Gln Lys Glu Asn Ser Leu Gln
 210 215 220
 Gln Asn Asp Asp Asp Glu Asn Lys Ile Ala Glu Lys Pro Asp Trp Glu
 225 230 235 240
 Ala Glu Lys Thr Thr Glu Ser Arg Asn Glu Arg His Leu Asn Gly Thr
 245 250 255
 Asp Thr Ser Phe Ser Leu Glu Asp Leu Phe Gln Leu Leu Ser Ser Gln
 260 265 270
 Pro Glu Asn Ser Leu Glu Gly Ile Ser Leu Gly Asp Ile Pro Leu Pro
 275 280 285
 Gly Ser Ile Ser Asp Gly Met Asn Ser Ser Ala His Tyr His Val Asn
 290 295 300
 Phe Ser Gln Ala Ile Ser Gln Asp Val Asn Leu His Glu Ala Ile Leu
 305 310 315 320
 Leu Cys Pro Asn Asn Thr Phe Arg Arg Asp Pro Thr Ala Arg Thr Ser
 325 330 335
 Gln Ser Gln Glu Pro Phe Leu Gln Leu Asn Ser His Thr Thr Asn Pro


```

      340      345      350
Glu Gln Thr Leu Pro Gly Thr Asn Leu Thr Gly Phe Leu Ser Pro Val
      355      360      365
Asp Asn His Met Arg Asn Leu Thr Ser Gln Asp Leu Leu Tyr Asp Leu
      370      375      380
Asp Ile Asn Ile Phe Asp Glu Ile Asn Leu Met Ser Leu Ala Thr Glu
385      390      395      400
Asp Asn Phe Asp Pro Ile Asp Val Ser Gln Leu Phe Asp Glu Ser Asp
      405      410      415
Ser Asp Ser Gly Leu Ser Leu Asp Ser Ser His Asn Asn Thr Ser Val
      420      425      430
Ile Lys Ser Asn Ser Ser His Ser Val Cys Asp Glu Gly Ala Ile Gly
      435      440      445
Tyr Cys Thr Asp His Glu Ser Ser Ser His His Asp Leu Glu Gly Ala
      450      455      460
Val Gly Gly Tyr Tyr Pro Glu Pro Ser Lys Leu Cys His Leu Asp Gln
465      470      475      480
Ser Asp Ser Asp Phe His Gly Asp Leu Thr Phe Gln His Val Phe His
      485      490      495
Asn His Thr Tyr His Leu Gln Pro Thr Ala Pro Glu Ser Thr Ser Glu
      500      505      510
Pro Phe Pro Trp Pro Gly Lys Ser Gln Lys Ile Arg Ser Arg Tyr Leu
      515      520      525
Glu Asp Thr Asp Arg Asn Leu Ser Arg Asp Glu Gln Arg Ala Lys Ala
      530      535      540
Leu His Ile Pro Phe Ser Val Asp Glu Ile Val Gly Met Pro Val Asp
545      550      555      560
Ser Phe Asn Ser Met Leu Ser Arg Tyr Tyr Leu Thr Asp Leu Gln Val
      565      570      575Leu Ile Arg
Asp Ile Arg Arg Arg Gly Lys Asn Lys Val Ala Ala
      580      585      590
Gln Asn Cys Arg Lys Arg Lys Leu Asp Ile Ile Leu Asn Leu Glu Asp
      595      600      605
Asp Val Cys Asn Leu Gln Ala Lys Lys Glu Thr Leu Lys Arg Glu Gln
      610      615      620
Ala Gln Cys Asn Lys Ala Ile Asn Ile Met Lys Gln Lys Leu His Asp
625      630      635      640
Leu Tyr His Asp Ile Phe Ser Arg Leu Arg Asp Asp Gln Gly Arg Pro
      645      650      655
Val Asn Pro Asn His Tyr Ala Leu Gln Cys Thr His Asp Gly Ser Ile
      660      665      670
Leu Ile Val Pro Lys Glu Leu Val Ala Ser Gly His Lys Lys Glu Thr
      675      680      685
Gln Lys Gly Lys Arg Lys
      690

```

<210> 5349

<211> 425

<212> DNA

<213> Homo sapiens

<400> 5349

gtgcacgaag ttccaatggg cttatgggag ggctaggtct ccacttcttt gtacctacac
60

acagttctca ggtcactgca tgtcactcct caccactgcc ctgtggttgc caggacaact
 120
 tgggcaaaca ccacaccagc agggagcccc aagcccagcc caagccccac aaagtctcca
 180
 gccaggaagg ggaaggcagg ataccactgc ctgggaaggc ggaagtgaga gaggcaggcc
 240
 aacccattcc tgtttctctt ctacttcttt ctccaaagaa agccctcact ctctcgcta
 300
 cagcccaggg aggtcacgag gggctgggaa gactcctgtg gcaaagtggc ccactccagc
 360
 ccaggcctga gaaaaaagg accccgaaat cttctgggt accagtatct tctgccttca
 420
 cgcgt
 425

<210> 5350
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 5350
 Met Gly Gly Leu Gly Leu His Phe Phe Val Pro Thr His Ser Ser Gln
 1 5 10 15
 Val Thr Ala Cys His Ser Ser Pro Leu Pro Cys Gly Cys Gln Asp Asn
 20 25 30
 Leu Gly Lys His His Thr Ser Arg Glu Pro Gln Ala Gln Pro Lys Pro
 35 40 45
 His Lys Val Ser Ser Gln Glu Gly Glu Gly Arg Ile Pro Leu Pro Gly
 50 55 60
 Lys Ala Glu Val Arg Glu Ala Gly Gln Pro Ile Pro Val Ser Leu Leu
 65 70 75 80
 Leu Leu Ser Pro Lys Lys Ala Leu Thr Leu Leu Ala Thr Ala Gln Gly
 85 90 95
 Gly His Glu Gly Leu Gly Arg Leu Leu Trp Gln Ser Gly Pro Leu Gln
 100 105 110
 Pro Arg Pro Glu Lys Lys Arg Thr Pro Lys Ser Phe Trp Leu Pro Val
 115 120 125
 Ser Ser Ala Phe Thr Arg
 130

<210> 5351
 <211> 343
 <212> DNA
 <213> Homo sapiens

<400> 5351
 gtgcacagtc agctcgacta ggggtgtcata ggccgcgctg cactgtcggc atcggaatct
 60
 gctggcccct gtgaacacag tcccgcacat cttgctgctc tgtcgggtaca actgcaccga
 120
 gctgaacagg ctgggttttcg agacggaccg agaaggcaag ttctgctgca ggctttttgga
 180
 cagagcgtct tgggtgccaat caaaatcact cttgttgctg ccgttttcggg tgtcacagtt
 240

cctcctctca ctattggaca gcttgaagcc aaggcccagg cctgaccagt aggaatccga
 300
 caggatgttg gcgtagacag cggtcatttt atccatgcaa ttg
 343

<210> 5352
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 5352
 Met Asp Lys Met Thr Ala Val Tyr Ala Asn Ile Leu Ser Asp Ser Tyr
 1 5 10 15
 Trp Ser Gly Leu Gly Leu Gly Phe Lys Leu Ser Asn Ser Glu Arg Arg
 20 25 30
 Asn Cys Asp Thr Arg Asn Gly Ser Asn Lys Ser Asp Phe Asp Trp His
 35 40 45
 Gln Asp Ala Leu Ser Lys Ser Leu Gln Gln Asn Leu Pro Ser Arg Ser
 50 55 60
 Val Ser Lys Pro Ser Leu Phe Ser Ser Val Gln Leu Tyr Arg Gln Ser
 65 70 75 80
 Ser Lys Met Cys Gly Thr Val Phe Thr Gly Ala Ser Arg Phe Arg Cys
 85 90 95
 Arg Gln Cys Ser Ala Ala Tyr Asp Thr Leu Val Glu Leu Thr Val His
 100 105 110

<210> 5353
 <211> 4217<212> DNA
 <213> Homo sapiens

<400> 5353
 tttttttttt ttgaaatgta agtatacaga ttttaattta tttttaagaa taattgtata
 60
 ttttaaaaac aggacacgta ctgtatgagt aaacagcgtg gctaacacca agtccacact
 120
 ggtaagcttt tgagaacccat ttacactatg ttgacagtag tactgctgca ggcagacagc
 180
 ggaagaataa ataatagtgc ttcaagaaga gtagtgattg agaggatagg taaagagggc
 240
 gcctcatcgt ggaagctaga gcaggaacac ctccccagta gtgacatgtg caaagttcca
 300
 aatctccacg acaaagacag ctcaaccac tggaacaaac agactcccaa tgtggctggc
 360
 aactgcgggg gtagaagaac tcaggcaaag taggcacagg aatgggggag atgagagcca
 420
 agggacaaac gccgagaaag cgttccgaca agcatgtgtg ttcatacatg cataccccca
 480
 acaaagggca atgcactgtg taacagaact gaacacaatt taacaaagct gctcccagcc
 540
 ttctgtcac ctctttggca gtagggcagg ccatctcaac ttcggacaca caaagacatt
 600
 ctcttcagga ggaaggctgt cctgtgtggt ggggacaagg cttcaggtaa gagcaaagct
 660

atgatagcta cagcattaat tgaacatgcc taaacaaaaa agatgttaat tactagttac
720
aggtatacat gccaaaatta cccccaggga tgggcatagt caatcatttt cctacagtgg
780
tgaaataaaa caagctttga tcatgttca gcaagtagaa ttatgtggta gagaagtcag
840
gccccatatg ctaaaatttg cactttctgc cataaacttt tcatgtatat aagtcaaaac
900
ccagtctcct aggaccacta aacctatgat gggctttcaa ctgtaacact cattcacatc
960
tttaagttag gcccatgggc atggaacctg gccaaagggtt caagcacgcc taagctgaag
1020
aaaaactaaa gtcaccccca tataattagg tccagtctag gcacaggaag ccacagctgg
1080
ttgactgac agggcttctc aggactggat gttggttgaa ttgaggattc cagaagtagc
1140
atcagatttg gaagcctttg aaagtctctg ctgttgaaaa ataaataaca tcagtggcca
1200
tactgcctct cttacacatg gcccacctt ctaagtttg ttaagtgtca gaaaaggtc
1260
ccttgaaggc agtttctctg agatccctag cctgcaatag gctgcgttag gagtaaaagg
1320
tgaggaaactc tgagcaccat tctattagtc acagacagag tgcattgtgca cgcattgccc
1380
tgaccccgcc ggggcccagga ggaagctgga gccggaggcc gggcgaggag ttggtctccg
1440
ccgcccaggc tcagccgctc cgcgcacgtc cctcgtctgc agcgctaccg cgagctgcac
1500
cggcgctccg tggaggagcc gcggaattc tggggagaca ttgccaagga attttactgg
1560
aagactccat gccctggccc attccttcgg tacaactttg atgtgactaa agggaaaatc
1620
ttcattgagt ggatgaaagg agcaactacc aacatctgct acaatgtact ggatcgaaat
1680
gtccatgaga aaaagcttgg agataaagtt gctttttact gggagggcaa tgagccaggg
1740
gagaccactc agatcacata ccatcagctt ctgggtccaag tgtgtcagtt cagcaatgtt
1800
ctccgaaaac agggcattca gaagggggac cgagtggcca tctacatgcc tatgatccca
1860
gagcttgtgg tggccatgct ggcattgtgc cgcattgggg ctttgactc cattgtgttt
1920
gcaggcttct cttcagagtc tctatgtgaa cgatcttgg attccagctg cagtcttctc
1980
atcactacag atgccttcta caggggggaa aagcttgtga acctgaagga gctggctgac
2040
gaggccctgc agaagtgtca ggagaagggt ttcccagtaa gatgctgcat tgtggtcaag
2100
cacctggggc gggcagagct cggcatgggt actccaccag ccagtcccc ccaattaaga
2160
ggtcatgcc atgtgcagat ctcatggaac caagggattg acttgtggtg gcatgagctc
2220
atgcaagagg caggggatga gtgtgagccc gagtgggtg atgccgagga cccactcttc
2280

atcctgtaca ccagtggctc cacaggcaaa cccaaggggtg tgggtcacac agttgggggc
2340
tacatgctct atgtagccac aaccttcaag tatgtgtttg acttccatgc agaggatgtg
2400
ttctggtgca cggcagacat tggttggatc actggtcatt cctacgtcac ctatgggcca
2460
ctggccaatg gtgccaccag tgttttgttt gaggggattc ccacatatcc ggacgtgaac
2520
cgctgtgga gcattgtgga caaatacaag gtgaccaagt tctacacagc acccacagcc
2580
atccgtctgc tcatgaagtt tggagatgag cctgtcacca agcatagccg ggcatccttg
2640
caggtgttag gcacagtggg tgaacccatc aaccctgagg cctggctatg gtaccaccgg
2700
gtggtaggtg cccagcgctg ccccatcgtg gacaccttct ggcaaacaga gacaggtggc
2760
cacatgttga ctccccctcc tgttcccaca cccatgaaac ccggttctgc tactttccca
2820
ttctttggtg tagctcctgc aatcctgaat gagtccgggg aagagttgga aggtgaagct
2880
gaaggttatc tgggtgttcaa gcagccctgg ccagggatca tgcgcacagt ctatgggaac
2940
cacgaacgct ttgagacaac ctactctaag aagtttctg gatactatgt tacaggagat
3000
ggctgccagc gggaccagga tggctattac tggatcactg gcaggattga tgacatgctc
3060
aatgtatctg gacacctgct gagtacagca gaggtggagt cagcacttgt ggaacatgag
3120
gctgttgca gaggcagctg ggtggggccac cctcatcctg tgaaggggtga atgcctctac
3180
tgctttgtca ccttgtgtga tggccacacc ttcagcccca agctcaccga ggagctcaag
3240
aagcagatta gagaaaagat tggcccccatt gccacaccag actacatcca gaatgcacct
3300
ggcttgccca aaacccgctc agggaaaatc atgaggcgag tgcttcggaa gattgctcag
3360
aatgaccatg acctcgggga catgtctact gtggctgacc catctgtcat cagtcacctc
3420
ttcagccacc gctgcctgac catccagtga acatgatcct gacctttacc taggattcct
3480
cctgctccaa actttgcccc tctcttttgc cccctcagga gtgctgaggg ccagtgttga
3540
cccacactac cctcccttga ccagctgtct gggaccggaa accagctttg tctccaggta
3600
gagacaacat cctgtgactg ccaggcagaa aggacagggc ccaggtcagc ctcagtctgc
3660
tgtgcctcca gactgcagag ctctcagaac ccagaacaga gacgaaaagg ctacctctcc
3720
tacccaagtt aagtgttcaa aggggatgtg agggcctcca ctgaagcagg gaggcagctg
3780
tgtaatccta tgtcagctct cttaggaagc cccagtactt atattgggca tgcacttgcc
3840
cttaaaaaaca atgatttgtg agtccaggaa caatttacta tttttaaaat attttgctgc
3900

ttctgttctg ggtctgaatt cccttttgtg ccagatgccca gtactgtctg cccattggct
 3960
 ccaggggctg tatgggcaga ttcagtctcc agagggtatt cagatcatct gcttctttga
 4020
 aggagtaaat gtgttttgtt cctagggcca gaggagcttg tcttccttgt cctctgttcc
 4080
 caccctcccc tgaacagaac ccagcccata agagacattc tcagatgaaa ctctgttttc
 4140
 ttgccccagt caggctcaag ccctgtgggt gtaggaataa agcctgtgat ctcaaaaaaa
 4200
 aaaaaaaaaa aaaaaaa
 4217

<210> 5354
 <211> 605
 <212> PRT
 <213> Homo sapiens

<400> 5354
 Met Lys Gly Ala Thr Thr Asn Ile Cys Tyr Asn Val Leu Asp Arg Asn
 1 5 10 15
 Val His Glu Lys Lys Leu Gly Asp Lys Val Ala Phe Tyr Trp Glu Gly
 20 25 30
 Asn Glu Pro Gly Glu Thr Thr Gln Ile Thr Tyr His Gln Leu Leu Val
 35 40 45
 Gln Val Cys Gln Phe Ser Asn Val Leu Arg Lys Gln Gly Ile Gln Lys
 50 55 60
 Gly Asp Arg Val Ala Ile Tyr Met Pro Met Ile Pro Glu Leu Val Val
 65 70 75 80
 Ala Met Leu Ala Cys Ala Arg Ile Gly Ala Leu His Ser Ile Val Phe
 85 90 95
 Ala Gly Phe Ser Ser Glu Ser Leu Cys Glu Arg Ile Leu Asp Ser Ser
 100 105 110
 Cys Ser Leu Leu Ile Thr Thr Asp Ala Phe Tyr Arg Gly Glu Lys Leu
 115 120 125
 Val Asn Leu Lys Glu Leu Ala Asp Glu Ala Leu Gln Lys Cys Gln Glu
 130 135 140
 Lys Gly Phe Pro Val Arg Cys Cys Ile Val Val Lys His Leu Gly Arg
 145 150 155 160
 Ala Glu Leu Gly Met Gly Thr Pro Pro Ala Ser Pro Pro Gln Leu Arg
 165 170 175
 Gly His Ala Asp Val Gln Ile Ser Trp Asn Gln Gly Ile Asp Leu Trp
 180 185 190
 Trp His Glu Leu Met Gln Glu Ala Gly Asp Glu Cys Glu Pro Glu Trp
 195 200 205
 Cys Asp Ala Glu Asp Pro Leu Phe Ile Leu Tyr Thr Ser Gly Ser Thr
 210 215 220
 Gly Lys Pro Lys Gly Val Val His Thr Val Gly Gly Tyr Met Leu Tyr
 225 230 235 240
 Val Ala Thr Thr Phe Lys Tyr Val Phe Asp Phe His Ala Glu Asp Val
 245 250 255
 Phe Trp Cys Thr Ala Asp Ile Gly Trp Ile Thr Gly His Ser Tyr Val
 260 265 270
 Thr Tyr Gly Pro Leu Ala Asn Gly Ala Thr Ser Val Leu Phe Glu Gly

275	280	285
Ile Pro Thr Tyr Pro Asp Val Asn Arg Leu Trp Ser Ile Val Asp Lys		
290	295	300
Tyr Lys Val Thr Lys Phe Tyr Thr Ala Pro Thr Ala Ile Arg Leu Leu		
305	310	315
Met Lys Phe Gly Asp Glu Pro Val Thr Lys His Ser Arg Ala Ser Leu		
	325	330
Gln Val Leu Gly Thr Val Gly Glu Pro Ile Asn Pro Glu Ala Trp Leu		
	340	345
Trp Tyr His Arg Val Val Gly Ala Gln Arg Cys Pro Ile Val Asp Thr		
	355	360
Phe Trp Gln Thr Glu Thr Gly Gly His Met Leu Thr Pro Leu Pro Val		
	370	375
Pro Thr Pro Met Lys Pro Gly Ser Ala Thr Phe Pro Phe Phe Gly Val		
385	390	395
Ala Pro Ala Ile Leu Asn Glu Ser Gly Glu Glu Leu Glu Gly Glu Ala		
	405	410
Glu Gly Tyr Leu Val Phe Lys Gln Pro Trp Pro Gly Ile Met Arg Thr		
	420	425
Val Tyr Gly Asn His Glu Arg Phe Glu Thr Thr Tyr Ser Lys Lys Phe		
	435	440
Pro Gly Tyr Tyr Val Thr Gly Asp Gly Cys Gln Arg Asp Gln Asp Gly		
	450	455
Tyr Tyr Trp Ile Thr Gly Arg Ile Asp Asp Met Leu Asn Val Ser Gly		
465	470	475
His Leu Leu Ser Thr Ala Glu Val Glu Ser Ala Leu Val Glu His Glu		
	485	490
Ala Val Ala Glu Ala Ala Val Val Gly His Pro His Pro Val Lys Gly		
	500	505
Glu Cys Leu Tyr Cys Phe Val Thr Leu Cys Asp Gly His Thr Phe Ser		
	515	520
Pro Lys Leu Thr Glu Glu Leu Lys Lys Gln Ile Arg Glu Lys Ile Gly		
	530	535
Pro Ile Ala Thr Pro Asp Tyr Ile Gln Asn Ala Pro Gly Leu Pro Lys		
545	550	555
Thr Arg Ser Gly Lys Ile Met Arg Arg Val Leu Arg Lys Ile Ala Gln		
	565	570
Asn Asp His Asp Leu Gly Asp Met Ser Thr Val Ala Asp Pro Ser Val		
	580	585
Ile Ser His Leu Phe Ser His Arg Cys Leu Thr Ile Gln		
	595	600
		605

<210> 5355

<211> 1596

<212> DNA

<213> Homo sapiens

<400> 5355

agaaagtgc tagaatgt gatccacttt gcttggaag agaagctctt tctcctggct

60

gatgaggtgt accaggacaa cgtgtactct ccagattgca gattccactc cttcaagaag

120

gtgctgtacg agatggggcc cgagtactcg agtaatgtgg agcttgccct cttccactcc

180

```

acctccaagg gctacatggg cgaatgcggc tacagaggag gctacatgga ggtgggtcaat
240
ttgcaccccc agatcaaggg ccagctgggtg aagctgctgt cgggtgcgcct gtgcccccca
300
gtgtctgggc aggccgcgat ggacattggt gtgaaccccc cgggtggcagg agaggagtcc
360
tttgagcaat tcagccgaga gaaggagtgc gtcctgggta atctggccaa aaaagcaaag
420
ctgacggaag acctgtttta ccaagtccca ggaattcact gcaaccctt gcagggggcc
480
atgtacgcct tccctcggat cttcattcct gccaaagctg tggaggctgc tcaggcccat
540
caaatggctc cagacatggt ctactgcatg aagctcctgg aggagactgg catctgtgtc
600
gtgcccggca gtggcttttg gcagagggaa ggcaacttacc acttcaggat gactatcctc
660
cctccagtgg agaagctgaa aacggtgctg cagaagggtga aagacttcca catcaacttc
720
ctggagaagt acgcgtgagg acgcctgagc cccagcggga gacctgtcct tggctcttcc
780
tcccaatgcc cgtcaggctg aactcgcctc ccccgtagct ctgcctcggg cctcgcagag
840
gccgtgggtc acttcgtcat ctttttgccc ctggagacgt ctttctttgt gccttgatgt
900
tgagagcgcc tctcttttga gcaaacaagc attctatatg caaccagagt agagggggacc
960
tgctcagcag gtgtgaccag ggttctctga atctgttatt gtttttgctt ctggaaaagt
1020
catttggggg ttacaacaac taggatgtgt tgggtgagat gtttcagatc tggagaaatg
1080
agcagggtgc gggaaatgtg tgacttaacc gtggtgaggg ctggaaatcc aaactcacca
1140
ccatgatctg tgaaataaag cccttagcgg tgtgaagcat ccggtccttt gaacagaagg
1200
gcctggaagg cccctggggc tgagaaaggg tccgcccggg ggcctggagg caggcgcggg
1260
gagcgcagta gcacgtggac tgggcaggat gttgcactag cttggggtag atgctggggg
1320
ctgcggccac ggtcagaggg ccccaactgt aggcgtgggt gtgagccagg ctgcaggagg
1380
aactgggcct ccgcttccca gcaacgcagc caggcctgag aattctgtgc gcccggcggg
1440
ctttgggaat gaggggttcc cttgaacatg cgtaggctgg aaccccgctc gagaggtctc
1500
cctgaatttc agtgacacat agtcagccc ggcagtgtcc cacttccgtg gagagagccg
1560
ctggaatggg gtggacccat cccgcgggtg accggt
1596

```

<210> 5356

<211> 245

<212> PRT

<213> Homo sapiens

<400> 5356

Arg Lys Cys Ile Glu Asp Val Ile His Phe Ala Trp Glu Glu Lys Leu
 1 5 10 15
 Phe Leu Leu Ala Asp Glu Val Tyr Gln Asp Asn Val Tyr Ser Pro Asp
 20 25 30
 Cys Arg Phe His Ser Phe Lys Lys Val Leu Tyr Glu Met Gly Pro Glu
 35 40 45
 Tyr Ser Ser Asn Val Glu Leu Ala Ser Phe His Ser Thr Ser Lys Gly
 50 55 60
 Tyr Met Gly Glu Cys Gly Tyr Arg Gly Gly Tyr Met Glu Val Val Asn
 65 70 75 80
 Leu His Pro Glu Ile Lys Gly Gln Leu Val Lys Leu Leu Ser Val Arg
 85 90 95
 Leu Cys Pro Pro Val Ser Gly Gln Ala Ala Met Asp Ile Val Val Asn
 100 105 110
 Pro Pro Val Ala Gly Glu Glu Ser Phe Glu Gln Phe Ser Arg Glu Lys
 115 120 125
 Glu Ser Val Leu Gly Asn Leu Ala Lys Lys Ala Lys Leu Thr Glu Asp
 130 135 140
 Leu Phe Asn Gln Val Pro Gly Ile His Cys Asn Pro Leu Gln Gly Ala
 145 150 155 160
 Met Tyr Ala Phe Pro Arg Ile Phe Ile Pro Ala Lys Ala Val Glu Ala
 165 170 175
 Ala Gln Ala His Gln Met Ala Pro Asp Met Phe Tyr Cys Met Lys Leu
 180 185 190
 Leu Glu Glu Thr Gly Ile Cys Val Val Pro Gly Ser Gly Phe Gly Gln
 195 200 205
 Arg Glu Gly Thr Tyr His Phe Arg Met Thr Ile Leu Pro Pro Val Glu
 210 215 220
 Lys Leu Lys Thr Val Leu Gln Lys Val Lys Asp Phe His Ile Asn Phe
 225 230 235 240
 Leu Glu Lys Tyr Ala
 245

<210> 5357

<211> 1722

<212> DNA

<213> Homo sapiens

<400> 5357

agtgggatct gtcggcttgt caggtggtgg aggaaaaggc gctccgtcat ggggatccag
 60
 acgagccccg tctgtctggc ctccctgggg gtggggctgg tcaactctgct cggcctggct
 120
 gtgggctcct acttggttcg gaggtcccg cgccctcagg tcaactctcct ggaccccaat
 180
 gaaaagtacc tgctacgact gctagacaag acgactgtga gccacaacac caagaggttc
 240
 cgctttgccc tgcccaccgc ccaccacact ctggggctgc ctgtgggcaa acatatctac
 300
 ctctccaccc gaattgatgg cagcctggtc atcaggccat acactcctgt caccagtgt
 360
 gaggatcaag gctatgtgga tcttgtcatc aaggtctacc tgaagggtgt gcaccccaaa
 420

tttcctgagg gaggaagat gtctcagtac ctggatagcc tgaagggttg ggatgtggtg
 480
 gagtttcggg ggccaagcgg gttgctcact tacactggaa aagggcattt taacattcag
 540
 cccaacaaga aatctccacc agaaccgga gtggcgaaga aactgggaat gattgccggc
 600
 gggacaggaa tcaccccaat gctacagctg atccgggcca tcctgaaagt ccctgaagat
 660
 ccaaccagtg gctttctgct ttttgccaac cagacagaaa aggatatcat cttgcgggag
 720
 gacttagagg aactgcaggc ccgctatccc aatcgcttta agctctgggt cactctggat
 780
 catcccccga aagattgggc ctacagcaag ggctttgtga ctgccgacat gatccgggaa
 840
 cacctgcccc ctccagggga tgatgtgctg gtactgcttt gtgggccacc cccaatggtg
 900
 cagctggcct gccatcccaa cttggacaaa ctgggctact cacaaaagat gcgattcacc
 960
 tactgagcat cctccagctt ccctgggtgct gttcgctgca gttgttcccc atcagtactc
 1020
 aagcactata agccttagat tcctttcctc agagtttcag gttttttcag ttacatctag
 1080
 agctgaaatc tggatagtag ctgcaggaac aatattcctg tagccatgga agagggccaa
 1140
 ggctcagtea ctctctggat ggccctcctaa atctccccgt ggcaacagggt ccaggagagg
 1200
 cccatggagc agtctcttcc atggagtaag aagggaaggga gcatgtacgc ttggtccaag
 1260
 attggctagt tccttgatag catcttactc tcaccttctt tgtgtctgtg atgaaaggaa
 1320
 cagtctgtgc aatgggtttt acttaaactt cactgttcaa cctatgagca aatctgtatg
 1380
 tgtgagtata agttgagcat agcatacttc cagagggtggt cttatggaga tggcaagaaa
 1440
 ggaggaaatg attttctcag atctcaaagg agtctgaaat atcatatttc tgtgtgtgtc
 1500
 tctctcagcc cctgcccagg ctagagggaa acagctactg ataatcgaaa actgctgttt
 1560
 gtggcaggaa cccctggctg tgcaataaaa tggggctgag gccctgtgt gatattgaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1680
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1722

<210> 5358

<211> 321

<212> PRT

<213> Homo sapiens

<400> 5358

Ser Gly Ile Cys Arg Leu Val Arg Trp Trp Arg Lys Arg Arg Ser Val
 1 5 10 15
 Met Gly Ile Gln Thr Ser Pro Val Leu Leu Ala Ser Leu Gly Val Gly

```
<210> 5359
<211> 5003
<212> DNA
<213> Homo sapiens
```

4535

ggaaacgacc atttcgccag ggttaacttt gaggaattta aggaaggttt tgtggctgtg
300
ttgtcttcaa atgctggtgt tcgcccctca gatgaagaca gtagttcttt ggaatcagct
360
gcctccagtg ccatccctcc aaagtatgtg aatggttcta agtggatagg ccgtcggagc
420
cggcctgagc tatgtgacgc tgccacagaa gccagacgcg tgccggagca gcaaaccag
480
gccagcctga aaagtcacct ctggcgctca gcgtctctgg agagcgtgga gagtcccaag
540
tcagatgaag aggccgagag cactaaagaa gctcagaatg aattatttga agcacaagga
600
cagctgcaga cctgggattc tgaggacttt gggagcccc agaagtcctg cagccccctc
660
tttgacaccc cagagagcca gatccggggc gtgtgggaag agctgggggt gggcagcagc
720
ggacacctga gcgagcagga gctggctgtg gtctgccaga gcgtcgggct ccaggggactc
780
gagaaagagg aactcgaaga cctgtttaac aaactggatc aagacggaga cggcaaagtg
840
agtcttgagg aattccagct tggcctcttc agtcatgagc ccgcgctact tctagagtct
900
tccactcggg ttaaaccgag caaggcttgg tctcattacc aggtcccaga ggagagcggc
960
tgccacacca ccacaacctc atccctcgtg tccctgtgct ccagcctgcg cctcttctcc
1020
agcattgacg atggttctgg ctctcgctttt cctgatcagg tcctggccat gtggacccag
1080
gaggggattc agaatggcag ggagatcttg cagagcctgg acttcagcgt ggacgagaag
1140
gtgaaccttc tggagctgac ctgggccctt gacaacgagc tcatgacagt ggacagtgcc
1200
gtccagcagg cagccctggc ctgctaccac caggagctga gctaccagca agggcaggtg
1260
gagcagctgg caaggagcgc tgacaaggca aggcaggacc tggagagggc cgagaagagg
1320
aacctggagt ttgtgaaaga gatggacgac tgccactcca ccctggagca gctcacggag
1380
aagaaaatca agcatctgga gcaggggtac cgggaaaggc tgagcctcct gcggtctgag
1440
gtggaggcgg agcgagagct gttctgggag caggcccaca ggcagagggc cgcgctggag
1500
tgggacgtgg ggcgcctgca ggctgaggag gctggcctcc gcgagaagct gaccctggcc
1560
ctgaaggaaa acagtcgcct acagaaggag attgtggaag tgggtggaaa gctttcggat
1620
tcggagaggc tggccctgaa gctgcagaag gacctggagt ttgtgctgaa ggacaagctg
1680
gagccacaga gtgcagagct cctggcccag gaggagcggc tcgcagcagt cctgaaggaa
1740
tacgagctca agtgccggga cctgcaggac cgcaacgatg agctgcaagc tgagctggaa
1800
ggcctgtggg cgcggctgcc caagaaccgg cacagcccct catggagccc ggatgggcgc
1860

agacggcagc tccctggact cggcccagca ggcatttcat tcctgggtaa ttctgctcca
1920
gtgagtatag aaacggagct gatgatggag caggtaaagg agcattacca agacctcagg
1980
accagctgg agaccaaggt aaattactac gaaagggaaa ttgcggcact gaaaaggaac
2040
tttgagaagg agaggaagga catggagcag gctcgcaggc gcgaggtcag cgtgctggag
2100
ggtcagaagg ccgacctgga ggagctccac gagaagtctc aggaggtcat ctggggcctg
2160
caggagcagc tgcaggacac agcccgcggc cccgagcctg agcagatggg cctggcacc
2220
tgctgcaccc aggcactgtg tggcctggcc ctgcggcatc acagccacct gcagcagatc
2280
aggagagagg ctgaggcgga gctgagtgga gagctgtcgg ggctgggagc cctgcccgt
2340
cgagagacc tgaccttga gctggaggag ccgcccagg gaccctgcc acgcgggagc
2400
cagaggtcgg agcagctgga gctggagagg gcactgaagc tgcagccctg tgcgagcgag
2460
aagcgcgcc agatgtcgt atcgttggc ctgcaggagg aggagtga gcttgccgc
2520
gggaagcgag tggacgggc ctccctggaa gcagagatgc aggccctgcc gaaagatggg
2580
ctggtggcag gaagtggcca ggagggcaca cgtggcctcc taccactgcg tccgggtgt
2640
ggggagcggc cactggcctg gctggcccca ggtgatggca gagagtctga ggaggcggca
2700
ggagccgggc ctgcgcgag gcaagcccag gacacagaag ctacgcagag cccggccccc
2760
gcccctgccc cggcatccca cggccctca gagagggtgt cacgcatgca gccctgtgga
2820
gtggatgggg atattgtccc aaaggagcca ggcctttcg gcgcgagcg agcggggctg
2880
gagcagcctg gagccggga gctgcctctg ctgggaacag agagagacgc ctgcgaaacc
2940
cagccacgga tgtgggagcc acccctgagg ccggccgctt cgtgcagggg acaggctgag
3000
aggctacagg ccattcagga agagcgagca cgaagctgga gcaggggcac ccaggagcag
3060
gcctcggagc agcaggcccc ggccgagggc gccctggagc ctgggtgtca caagcacagt
3120
gtggaggttg ccaggagagg gtccttgcca tcccacctcc agctcgcaga cccgcaggg
3180
tcctggcagg agcagcttgc tgccccagaa gagggggaga ccaaaatagc gctggagaga
3240
gagaaggatg acatggaaac caaacttcta catctggaag acgtcgtccg ggctctggag
3300
aaacatgtag atttgagaga gaacgacaga ctggagttcc atagactttc tgaagaaaac
3360
actttgttga aaaacgatct ggggaagggtt cggcaagagc ttgaagctgc agaaagtact
3420
cacgatgcac agaggaagga aattgaggtt ttaaagaaag acaaggaaaa ggcctgctct
3480

gagatggagg tgctcaacag acagaatcag aactacaagg atcaattatc ccagctcaat
3540
gtcagggttc ttcaactggg acaggaggct tctaccacc aggcccaaaa cgaggagcat
3600
cgtgtgacca ttcagatggt aacacagagc ctggaggagg tggttcgag tgggcagcag
3660
cagagtgacc aaatccaaaa acttagagtt gaacttgaat gcctgaatca ggaacatcag
3720
agcctgcagc tgccatggtc agagctgacc cagacccttg aggaaagtca agaccaggtg
3780
cagggagctc acctgaggct gaggcaggcc caggcccagc acttgacagga ggtccggctg
3840
gtgccccagg accgtgtggc cgagctgcat cgcttgcctca gccttcaggg agagcaggcc
3900
aggaggcgcc tggatgcaca gcgggaagaa catgagaaac agctgaaagc cacagaagag
3960
cgggtggaag aggcggagat gattctgaag aatatggaaa tgctcctcca agagaaagtg
4020
gataagctga aggagcagtt tgaaaagaac acgaagtccg acctgctgct gaaggagctg
4080
tacgtggaga acgcccacct ggtgagagca cttcaggcca ccgaggagaa gcagcgaggc
4140
gccgagaaac aaagccgcct cttggaagaa aaagtctcg cttctcaaaa actcgtcagt
4200
aggattgccc ccgcagccct ctctgtgtaa agacagatta ttttctagga ttcattcgaa
4260
agcacatctt ttaaattaag cactgtgct gccttagatt ccgtgggtca tgagccatga
4320
gtcctgggac atctgaggat tgggattctt tgttcacccc gcagatagtt aatgaatggt
4380
ctgccctggg caagatggag gtgggggctg ggggaatatg catgttcgag aagccggcgt
4440
ttttattagc ggtcctgagt aatttcctt ggcaaaattc ccagtcttgc cactctctgg
4500
agccagatcc tgggagctgt cagcaaggag caggtaagtg agcagttatg gacagcactt
4560
tccatgtggt gcttccgacc ctggctgtca gagtgaatg taaagtcagg gctctgtaca
4620
gttttgccat ttcactgttc tgctttaagc ttagcttatt agaactcttg gtggagggtg
4680
cgtacacaca ttccagaaaa ggcttcactc gctgggaacg tcaaccacgc gagaaaggag
4740
gggaagcccc ttctccgggg accttatctg tggactcagg aatgatggtg tttattgcaa
4800
atgcacaatc tttttcccat tgaaatgtca tcacactgga aattgtacta tatgtaaaaa
4860
aaaaaaaaaa gtatagtttt atatttgaaa tgtatgcaaa ttatggccat atggctgatt
4920
ggaatgtact actgtaatat aaaaagtcac tgtatttgca ataaattctt ttctattaaa
4980
attgaaaaaa aaaaaaaaaa aaa
5003

<210> 5360

<211> 1406

<212> PRT

<213> Homo sapiens

<400> 5360

Gly Thr Gly Val Val Pro Arg Ser Trp Pro Arg Ala Gly Gly Arg Arg
 1 5 10 15
 Arg Arg Leu Pro Ala Cys Tyr Gly Met Asp Glu Glu Glu Asn His Tyr
 20 25 30
 Val Ser Gln Leu Arg Glu Val Tyr Ser Ser Cys Asp Thr Thr Gly Thr
 35 40 45
 Gly Phe Leu Asp Arg Gln Glu Leu Thr Gln Leu Cys Leu Lys Leu His
 50 55 60
 Leu Glu Gln Gln Leu Pro Val Leu Leu Gln Thr Leu Leu Gly Asn Asp
 65 70 75 80
 His Phe Ala Arg Val Asn Phe Glu Glu Phe Lys Glu Gly Phe Val Ala
 85 90 95
 Val Leu Ser Ser Asn Ala Gly Val Arg Pro Ser Asp Glu Asp Ser Ser
 100 105 110
 Ser Leu Glu Ser Ala Ala Ser Ser Ala Ile Pro Pro Lys Tyr Val Asn
 115 120 125
 Gly Ser Lys Trp Tyr Gly Arg Arg Ser Arg Pro Glu Leu Cys Asp Ala
 130 135 140
 Ala Thr Glu Ala Arg Arg Val Pro Glu Gln Gln Thr Gln Ala Ser Leu
 145 150 155 160
 Lys Ser His Leu Trp Arg Ser Ala Ser Leu Glu Ser Val Glu Ser Pro
 165 170 175
 Lys Ser Asp Glu Glu Ala Glu Ser Thr Lys Glu Ala Gln Asn Glu Leu
 180 185 190
 Phe Glu Ala Gln Gly Gln Leu Gln Thr Trp Asp Ser Glu Asp Phe Gly
 195 200 205
 Ser Pro Gln Lys Ser Cys Ser Pro Ser Phe Asp Thr Pro Glu Ser Gln
 210 215 220
 Ile Arg Gly Val Trp Glu Glu Leu Gly Val Gly Ser Ser Gly His Leu
 225 230 235 240
 Ser Glu Gln Glu Leu Ala Val Val Cys Gln Ser Val Gly Leu Gln Gly
 245 250 255
 Leu Glu Lys Glu Glu Leu Glu Asp Leu Phe Asn Lys Leu Asp Gln Asp
 260 265 270
 Gly Asp Gly Lys Val Ser Leu Glu Phe Gln Leu Gly Leu Phe Ser
 275 280 285
 His Glu Pro Ala Leu Leu Leu Glu Ser Ser Thr Arg Val Lys Pro Ser
 290 295 300
 Lys Ala Trp Ser His Tyr Gln Val Pro Glu Glu Ser Gly Cys His Thr
 305 310 315 320
 Thr Thr Thr Ser Ser Leu Val Ser Leu Cys Ser Ser Leu Arg Leu Phe
 325 330 335
 Ser Ser Ile Asp Asp Gly Ser Gly Phe Ala Phe Pro Asp Gln Val Leu
 340 345 350
 Ala Met Trp Thr Gln Glu Gly Ile Gln Asn Gly Arg Glu Ile Leu Gln
 355 360 365
 Ser Leu Asp Phe Ser Val Asp Glu Lys Val Asn Leu Leu Glu Leu Thr
 370 375 380
 Trp Ala Leu Asp Asn Glu Leu Met Thr Val Asp Ser Ala Val Gln Gln

```

385              390              395              400
Ala Ala Leu Ala Cys Tyr His Gln Glu Leu Ser Tyr Gln Gln Gly Gln
              405              410              415
Val Glu Gln Leu Ala Arg Glu Arg Asp Lys Ala Arg Gln Asp Leu Glu
              420              425              430
Arg Ala Glu Lys Arg Asn Leu Glu Phe Val Lys Glu Met Asp Asp Cys
              435              440              445
His Ser Thr Leu Glu Gln Leu Thr Glu Lys Lys Ile Lys His Leu Glu
              450              455              460
Gln Gly Tyr Arg Glu Arg Leu Ser Leu Leu Arg Ser Glu Val Glu Ala
465              470              475              480
Glu Arg Glu Leu Phe Trp Glu Gln Ala His Arg Gln Arg Ala Ala Leu
              485              490              495
Glu Trp Asp Val Gly Arg Leu Gln Ala Glu Glu Ala Gly Leu Arg Glu
              500              505              510
Lys Leu Thr Leu Ala Leu Lys Glu Asn Ser Arg Leu Gln Lys Glu Ile
              515              520              525
Val Glu Val Val Glu Lys Leu Ser Asp Ser Glu Arg Leu Ala Leu Lys
              530              535              540
Leu Gln Lys Asp Leu Glu Phe Val Leu Lys Asp Lys Leu Glu Pro Gln
545              550              555              560
Ser Ala Glu Leu Leu Ala Gln Glu Glu Arg Phe Ala Ala Val Leu Lys
              565              570              575
Glu Tyr Glu Leu Lys Cys Arg Asp Leu Gln Asp Arg Asn Asp Glu Leu
              580              585              590
Gln Ala Glu Leu Glu Gly Leu Trp Ala Arg Leu Pro Lys Asn Arg His
              595              600              605
Ser Pro Ser Trp Ser Pro Asp Gly Arg Arg Arg Gln Leu Pro Gly Leu
              610              615              620
Gly Pro Ala Gly Ile Ser Phe Leu Gly Asn Ser Ala Pro Val Ser Ile
625              630              635              640
Glu Thr Glu Leu Met Glu Gln Val Lys Glu His Tyr Gln Asp Leu
              645              650              655
Arg Thr Gln Leu Glu Thr Lys Val Asn Tyr Tyr Glu Arg Glu Ile Ala
              660              665              670
Ala Leu Lys Arg Asn Phe Glu Lys Glu Arg Lys Asp Met Glu Gln Ala
              675              680              685
Arg Arg Arg Glu Val Ser Val Leu Glu Gly Gln Lys Ala Asp Leu Glu
              690              695              700
Glu Leu His Glu Lys Ser Gln Glu Val Ile Trp Gly Leu Gln Glu Gln
705              710              715              720
Leu Gln Asp Thr Ala Arg Gly Pro Glu Pro Glu Gln Met Gly Leu Ala
              725              730              735
Pro Cys Cys Thr Gln Ala Leu Cys Gly Leu Ala Leu Arg His His Ser
              740              745              750
His Leu Gln Gln Ile Arg Arg Glu Ala Glu Ala Glu Leu Ser Gly Glu
              755              760              765
Leu Ser Gly Leu Gly Ala Leu Pro Ala Arg Arg Asp Leu Thr Leu Glu
              770              775              780
Leu Glu Glu Pro Pro Gln Gly Pro Leu Pro Arg Gly Ser Gln Arg Ser
785              790              795              800
Glu Gln Leu Glu Leu Glu Arg Ala Leu Lys Leu Gln Pro Cys Ala Ser
              805              810              815
Glu Lys Arg Ala Gln Met Cys Val Ser Leu Ala Leu Glu Glu Glu Glu

```


820	825	830
Leu Glu Leu Ala Arg Gly Lys Arg Val Asp Gly Pro Ser Leu Glu Ala		
835	840	845
Glu Met Gln Ala Leu Pro Lys Asp Gly Leu Val Ala Gly Ser Gly Gln		
850	855	860
Glu Gly Thr Arg Gly Leu Leu Pro Leu Arg Pro Gly Cys Gly Glu Arg		
865	870	875
Pro Leu Ala Trp Leu Ala Pro Gly Asp Gly Arg Glu Ser Glu Glu Ala		
885	890	895
Ala Gly Ala Gly Pro Arg Arg Arg Gln Ala Gln Asp Thr Glu Ala Thr		
900	905	910
Gln Ser Pro Ala Pro Ala Pro Ala Pro Ala Ser His Gly Pro Ser Glu		
915	920	925
Arg Trp Ser Arg Met Gln Pro Cys Gly Val Asp Gly Asp Ile Val Pro		
930	935	940
Lys Glu Pro Glu Pro Phe Gly Ala Ser Ala Ala Gly Leu Glu Gln Pro		
945	950	955
Gly Ala Arg Glu Leu Pro Leu Leu Gly Thr Glu Arg Asp Ala Ser Gln		
965	970	975
Thr Gln Pro Arg Met Trp Glu Pro Pro Leu Arg Pro Ala Ala Ser Cys		
980	985	990
Arg Gly Gln Ala Glu Arg Leu Gln Ala Ile Gln Glu Glu Arg Ala Arg		
995	1000	1005
Ser Trp Ser Arg Gly Thr Gln Glu Gln Ala Ser Glu Gln Gln Ala Arg		
1010	1015	1020
Ala Glu Gly Ala Leu Glu Pro Gly Cys His Lys His Ser Val Glu Val		
1025	1030	1035
Ala Arg Arg Gly Ser Leu Pro Ser His Leu Gln Leu Ala Asp Pro Gln		
1045	1050	1055
Gly Ser Trp Gln Glu Gln Leu Ala Ala Pro Glu Glu Gly Glu Thr Lys		
1060	1065	1070
Ile Ala Leu Glu Arg Glu Lys Asp Asp Met Glu Thr Lys Leu Leu His		
1075	1080	1085
Leu Glu Asp Val Val Arg Ala Leu Glu Lys His Val Asp Leu Arg Glu		
1090	1095	1100
Asn Asp Arg Leu Glu Phe His Arg Leu Ser Glu Glu Asn Thr Leu Leu		
1105	1110	1115
Lys Asn Asp Leu Gly Arg Val Arg Gln Glu Leu Glu Ala Ala Glu Ser		
1125	1130	1135
Thr His Asp Ala Gln Arg Lys Glu Ile Glu Val Leu Lys Lys Asp Lys		
1140	1145	1150
Glu Lys Ala Cys Ser Glu Met Glu Val Leu Asn Arg Gln Asn Gln Asn		
1155	1160	1165
Tyr Lys Asp Gln Leu Ser Gln Leu Asn Val Arg Val Leu Gln Leu Gly		
1170	1175	1180
Gln Glu Ala Ser Thr His Gln Ala Gln Asn Glu Glu His Arg Val Thr		
1185	1190	1195
Ile Gln Met Leu Thr Gln Ser Leu Glu Glu Val Val Arg Ser Gly Gln		
1205	1210	1215
Gln Gln Ser Asp Gln Ile Gln Lys Leu Arg Val Glu Leu Glu Cys Leu		
1220	1225	1230
Asn Gln Glu His Gln Ser Leu Gln Leu Pro Trp Ser Glu Leu Thr Gln		
1235	1240	1245
Thr Leu Glu Glu Ser Gln Asp Gln Val Gln Gly Ala His Leu Arg Leu		

1250 1255 1260
 Arg Gln Ala Gln Ala Gln His Leu Gln Glu Val Arg Leu Val Pro Gln
 1265 1270 1275 1280
 Asp Arg Val Ala Glu Leu His Arg Leu Leu Ser Leu Gln Gly Glu Gln
 1285 1290 1295
 Ala Arg Arg Arg Leu Asp Ala Gln Arg Glu Glu His Glu Lys Gln Leu
 1300 1305 1310
 Lys Ala Thr Glu Glu Arg Val Glu Glu Ala Glu Met Ile Leu Lys Asn
 1315 1320 1325
 Met Glu Met Leu Leu Gln Glu Lys Val Asp Lys Leu Lys Glu Gln Phe
 1330 1335 1340
 Glu Lys Asn Thr Lys Ser Asp Leu Leu Leu Lys Glu Leu Tyr Val Glu
 1345 1350 1355 1360
 Asn Ala His Leu Val Arg Ala Leu Gln Ala Thr Glu Glu Lys Gln Arg
 1365 1370 1375
 Gly Ala Glu Lys Gln Ser Arg Leu Leu Glu Glu Lys Val Arg Ala Leu
 1380 1385 1390
 Asn Lys Leu Val Ser Arg Ile Ala Pro Ala Ala Leu Ser Val
 1395 1400 1405

<210> 5361
 <211> 1080
 <212> DNA
 <213> Homo sapiens

<400> 5361
 nngaattcct ctccaaagca gagtacgtca agttttccct ggtgtcagac agcatttcac
 60
 catgaaaccc taagacctgc ctctgggct ccttcagct ggtgggctg gtgtgaagg
 120
 gggcttctg ggcctccggc agatggagga tggcattaaa tgccaacaca gtcagcttac
 180
 catccacaag gccagcagct gccaacagct gccctagacc tatcaacaag acaacttcat
 240
 ggctcccaat gggaatggag gctggggccg ccctacttag agcaggggaa agaacttttc
 300
 cctcaaagag cgggggcagg atgccagaat ctaactacat cctctcccg tttgcagttc
 360
 taggaagtgg aatttgctgc ctagggcgtg gtctaaagga caagtttaga aatgattcaa
 420
 ctcaagttcc taaacagagt aagtgccagt tgatgtccca ccgtggatcc tttactccag
 480
 aaaaattgta atgatggctc ggccaccgcc ttggctagag tccactgca cgcgtgtcgt
 540
 gagggccgat gggcaagtcc gtccggtttt tttgttgtt gttgttgtt tttgagatgg
 600
 agtctcgccc tgnttgccca gactgaagtg caaaggcccg atctcaactc actgcaacct
 660
 ccgcctcctg ggttcaaagg attctcctgt ctacgcctcc tgagtagctg ggattacagg
 720
 caccgccag cacgcccagc tttttttgt attttttagta gagacggggt tttatcatgt
 780
 tggccaggct ggtctogaac gcctgacctc atgnnatcca ccgccttgg cctcccaaat
 840

tgctgggacc acaggcgtga gccaccgcgc ccggccgtct gtctggtttt caaaccaatc
 900
 aatgaacccg taagcctctt tggtatatat aacaatgaaa aaattcatta agccatgaaa
 960
 tctagaaata agtcatatct ctgagttgat aaaatgcttt tctgaacata cattttaggt
 1020
 atctgggcgt gctggcgggt gcctgtaatc ccagctactc ggggaggctt gagacaggga
 1080

<210> 5362

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5362

Cys	Pro	Thr	Val	Asp	Pro	Leu	Leu	Gln	Lys	Asn	Cys	Asn	Asp	Gly	Ser
1				5					10					15	
Ala	Thr	Ala	Leu	Ala	Arg	Val	Pro	Leu	His	Ala	Cys	Arg	Glu	Gly	Arg
			20					25					30		
Trp	Ala	Ser	Pro	Ser	Gly	Phe	Phe	Cys	Cys	Cys	Cys	Cys	Phe	Leu	Arg
		35				40						45			
Trp	Ser	Leu	Ala	Leu	Xaa	Ala	Gln	Thr	Glu	Val	Gln	Arg	Pro	Asp	Leu
	50					55					60				
Asn	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Gly	Phe	Lys	Gly	Phe	Ser	Cys	Leu
65				70						75				80	
Ser	Leu	Leu	Ser	Ser	Trp	Asp	Tyr	Arg	His	Pro	Pro	Ala	Arg	Pro	Ala
				85					90				95		
Phe	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Leu	Ser	Cys	Trp	Pro	Gly
			100					105					110		
Trp	Ser	Arg	Thr	Pro	Asp	Leu	Met	Xaa	Ser	Thr	Arg	Leu	Gly	Leu	Pro
		115				120						125			
Asn	Cys	Trp	Asp	His	Arg	Arg	Glu	Pro	Pro	Arg	Pro	Ala	Val	Cys	Leu
	130					135					140				
Val	Phe	Lys	Pro	Ile	Asn	Glu	Pro	Val	Ser	Leu	Phe	Gly	Ile	Tyr	Asn
145					150					155					160
Asn	Glu	Lys	Ile	His											
				165											

<210> 5363

<211> 894

<212> DNA

<213> Homo sapiens

<400> 5363

cgcccgccgc gggcccctgg cgggcgggcg gtacagcccc aagcctgaga cccggacctg
 60
 agcatcgag gtctgagtcg cgccccgcct ggggcgaagc cgggggtggc ggcgacctcg
 120
 cggcggtgca ccggctctgt gacgacctcc cctctgagca cttcccttgt gacaggccac
 180
 ttcccttgtg acaggcccag gacgaggtgg ccaggcggcc cccatggcgt ccctggtcta
 240
 ggcggagaac cgctggggcg atgagtgaga acctcgacaa cgagggcccg aagcccatgg
 300

agagctgtgg ccaggagagc agcagtgcc ttagctgccc taccgtctcg gtgccccctg
 360
 cagccccggc agccctggag gaggtggaga aagagggcgc tggggcggct acagggcncg
 420
 gggcctcagc cggggtcta cagctacatc agggatgact tgtttacctc tgagatcttt
 480
 aaactggagc tgcagaacgc gcctcgccac gccagcttca gcgacgtccg gcgcttcctg
 540
 ggccgctttg gtctgcagcc ccacaaaacc aaactctttg ggcaaccacc ctgcgccttt
 600
 gtgacattcc gcagcgtgc agagagggac aaggccctgc gcgttttgca tgggtgcctc
 660
 tggaaaggcc gccactcag tgtggcctgg cccggcccaa ggccgacccc atggccagga
 720
 ggaggcngac aggaggggtga gagttagcca ccagtaacac gangtggccg acgtggtgac
 780
 ccctctatgg acagtgcctt antgctgagc agcttgagcg gaagcagctg gagtgcgagc
 840
 aggtgctgca gaaacnttgc ccaggaaatc gggagcacca accgtgcctt gcgt
 894

<210> 5364

<211> 187

<212> PRT

<213> Homo sapiens

<400> 5364

Ala	Ala	Leu	Pro	Ser	Arg	Cys	Pro	Leu	Gln	Pro	Arg	Gln	Pro	Trp	Arg
1				5					10					15	
Arg	Trp	Arg	Lys	Arg	Ala	Leu	Gly	Arg	Leu	Gln	Gly	Xaa	Gly	Pro	Gln
			20					25					30		
Pro	Gly	Leu	Tyr	Ser	Tyr	Ile	Arg	Asp	Asp	Leu	Phe	Thr	Ser	Glu	Ile
		35					40					45			
Phe	Lys	Leu	Glu	Leu	Gln	Asn	Ala	Pro	Arg	His	Ala	Ser	Phe	Ser	Asp
	50				55					60					
Val	Arg	Arg	Phe	Leu	Gly	Arg	Phe	Gly	Leu	Gln	Pro	His	Lys	Thr	Lys
65					70					75					80
Leu	Phe	Gly	Gln	Pro	Pro	Cys	Ala	Phe	Val	Thr	Phe	Arg	Ser	Ala	Ala
				85					90					95	
Glu	Arg	Asp	Lys	Ala	Leu	Arg	Val	Leu	His	Gly	Ala	Leu	Trp	Lys	Gly
			100					105					110		
Arg	Pro	Leu	Ser	Val	Ala	Trp	Pro	Gly	Pro	Arg	Pro	Thr	Pro	Trp	Pro
		115					120						125		
Gly	Gly	Gly	Xaa	Gln	Glu	Gly	Glu	Ser	Glu	Pro	Pro	Val	Thr	Arg	Xaa
	130					135					140				
Gly	Arg	Arg	Gly	Asp	Pro	Ser	Met	Asp	Ser	Ala	Leu	Xaa	Leu	Ser	Ser
145					150					155					160
Leu	Ser	Gly	Ser	Ser	Trp	Ser	Ala	Ser	Arg	Cys	Cys	Arg	Asn	Xaa	Ala
				165					170					175	
Gln	Glu	Ile	Gly	Ser	Thr	Asn	Arg	Ala	Leu	Arg					
			180						185						

<210> 5365

<211> 1824

<212> DNA

<213> Homo sapiens

<400> 5365

cagcctttcc cggcagcgag cgctcggcca ggtgcactag gcgctgtgcg ggccccctt
60
ccccgcgagt ccctcaagcg ggaacctgcc tcgtgtctcc caggagccat ggaggctgtg
120
gaactcgcca gaaaactgca ggaggaagct acgtgctcca tctgtctgga ttacttcaca
180
gaccctgtga tgaccacctg tggccacaac ttctgccgag cctgcatcca gctgagctgg
240
gaaaaggcga ggggcaagaa ggggaggcgg aagcggaagg gtccttccc ctgccccgag
300
tgcagagaga tgtccccgca gaggaacctg ctgccaacc ggctgctgac caaggtggcc
360
gagatggcgc agcagcatcc tgggtctgcag aagcaagacc tgtgccagga gcaccacgag
420
ccctcaagc ttttctgcca gaaggaccag agcccatct gtgtggtgtg cagggagtcc
480
cgggagcacc ggctgcacag ggtgctgccc gccgaggagg cagtgcaggg gtacaagttg
540
aagctggagg aggacatgga gtaccttcgg gagcagatca ccaggacagg gaatctgcag
600
gccagggagg agcagagctt agccgagtgg cagggcaagg tgaaggagcg gagagaacgc
660
attgtgctgg agtttgagaa gatgaacctc tacctggtgg aagaagagca gaggtcctc
720
caggctctgg agacggaaga agaggagact gccagcaggc tccgggagag cgtggcctgc
780
ctggaccggc agggtcactc tctggagctg ctgctgctgc agctggagga gcggagcaca
840
caggggcccc tccagatgct gcaggacatg aaggaacccc tgagcaggaa gaacaacgtg
900
agtgtgcagt gcccagaggt tgcccccca accagaccca ggactgtgtg cagagtcccc
960
ggacagattg aagtgtctaa aggcctttcta gaggatgtgg tgctgatgc cacctccgag
1020
taccctacc tcctctgta tgagagccgc cagaggcgct acctcggtc ttcgccggag
1080
ggcagtgggt tctgcagcaa ggaccgattt gtggcttacc cctgtgctgt gggccagacg
1140
gccttctcct ctgggaggca ctactgggag gtgggcatga acatcaccgg ggacgcgttg
1200
tgggccctgg gtgtgtgcag ggacaacgtg agccggaaag acagggtcct caagtgcccc
1260
gaaaacggct tctgggtggt gcagctgtcc aaggggacca agtacttata caccttctct
1320
gccctaacc cggtcatgct gatggagcct cccagccaca tgggcatctt cctggacttc
1380
gaagccgggg aagtgtcctt ctacagtgtg agcgatgggt cccacctgca cacctactcc
1440
caggccacct tcccaggccc cctgcagcct ttcttctgcc tgggggctcc gaagtctggt
1500

cagatgggtca tctccacagt gaccatgtgg gtgaaaggat agacacagac cgggggactc
 1560
 gggcactgct cctggctctg cagaagggtgt gggccttctg cttactgcag gccacctgcc
 1620
 agggttctct ggcattcagc tggcagccat tagacacaca ggggggtttc tcaaatctta
 1680
 aatataattg tgattagaac tgtcaaacat taagagggtta tactgacaga tgcttcctag
 1740
 aggaaacttt tgaaagcccc tgcgttctga gtggaccgat ttctaaatcc atacctacac
 1800
 accaaaaaaa aaaaaaagtc gagc
 1824

<210> 5366

<211> 477

<212> PRT

<213> Homo sapiens

<400> 5366

Met	Glu	Ala	Val	Glu	Leu	Ala	Arg	Lys	Leu	Gln	Glu	Glu	Ala	Thr	Cys
1			5						10					15	
Ser	Ile	Cys	Leu	Asp	Tyr	Phe	Thr	Asp	Pro	Val	Met	Thr	Thr	Cys	Gly
			20					25					30		
His	Asn	Phe	Cys	Arg	Ala	Cys	Ile	Gln	Leu	Ser	Trp	Glu	Lys	Ala	Arg
			35				40					45			
Gly	Lys	Lys	Gly	Arg	Arg	Lys	Arg	Lys	Gly	Ser	Phe	Pro	Cys	Pro	Glu
			50			55					60				
Cys	Arg	Glu	Met	Ser	Pro	Gln	Arg	Asn	Leu	Leu	Pro	Asn	Arg	Leu	Leu
65					70					75				80	
Thr	Lys	Val	Ala	Glu	Met	Ala	Gln	Gln	His	Pro	Gly	Leu	Gln	Lys	Gln
				85				90					95		
Asp	Leu	Cys	Gln	Glu	His	His	Glu	Pro	Leu	Lys	Leu	Phe	Cys	Gln	Lys
			100					105					110		
Asp	Gln	Ser	Pro	Ile	Cys	Val	Val	Cys	Arg	Glu	Ser	Arg	Glu	His	Arg
			115				120					125			
Leu	His	Arg	Val	Leu	Pro	Ala	Glu	Glu	Ala	Val	Gln	Gly	Tyr	Lys	Leu
			130			135					140				
Lys	Leu	Glu	Glu	Asp	Met	Glu	Tyr	Leu	Arg	Glu	Gln	Ile	Thr	Arg	Thr
145					150					155				160	
Gly	Asn	Leu	Gln	Ala	Arg	Glu	Glu	Gln	Ser	Leu	Ala	Glu	Trp	Gln	Gly
			165					170					175		
Lys	Val	Lys	Glu	Arg	Arg	Glu	Arg	Ile	Val	Leu	Glu	Phe	Glu	Lys	Met
			180				185					190			
Asn	Leu	Tyr	Leu	Val	Glu	Glu	Glu	Gln	Arg	Leu	Leu	Gln	Ala	Leu	Glu
			195			200					205				
Thr	Glu	Glu	Glu	Glu	Thr	Ala	Ser	Arg	Leu	Arg	Glu	Ser	Val	Ala	Cys
			210			215					220				
Leu	Asp	Arg	Gln	Gly	His	Ser	Leu	Glu	Leu	Leu	Leu	Leu	Gln	Leu	Glu
225					230					235				240	
Glu	Arg	Ser	Thr	Gln	Gly	Pro	Leu	Gln	Met	Leu	Gln	Asp	Met	Lys	Glu
			245					250				255			
Pro	Leu	Ser	Arg	Lys	Asn	Asn	Val	Ser	Val	Gln	Cys	Pro	Glu	Val	Ala
			260				265					270			
Pro	Pro	Thr	Arg	Pro	Arg	Thr	Val	Cys	Arg	Val	Pro	Gly	Gln	Ile	Glu

275 280 285
 Val Leu Arg Gly Phe Leu Glu Asp Val Val Pro Asp Ala Thr Ser Ala
 290 295 300
 Tyr Pro Tyr Leu Leu Leu Tyr Glu Ser Arg Gln Arg Arg Tyr Leu Gly
 305 310 315 320
 Ser Ser Pro Glu Gly Ser Gly Phe Cys Ser Lys Asp Arg Phe Val Ala
 325 330 335
 Tyr Pro Cys Ala Val Gly Gln Thr Ala Phe Ser Ser Gly Arg His Tyr
 340 345 350
 Trp Glu Val Gly Met Asn Ile Thr Gly Asp Ala Leu Trp Ala Leu Gly
 355 360 365
 Val Cys Arg Asp Asn Val Ser Arg Lys Asp Arg Val Leu Lys Cys Pro
 370 375 380
 Glu Asn Gly Phe Trp Val Val Gln Leu Ser Lys Gly Thr Lys Tyr Leu
 385 390 395 400
 Ser Thr Phe Ser Ala Leu Thr Pro Val Met Leu Met Glu Pro Pro Ser
 405 410 415
 His Met Gly Ile Phe Leu Asp Phe Glu Ala Gly Glu Val Ser Phe Tyr
 420 425 430
 Ser Val Ser Asp Gly Ser His Leu His Thr Tyr Ser Gln Ala Thr Phe
 435 440 445
 Pro Gly Pro Leu Gln Pro Phe Cys Leu Gly Ala Pro Lys Ser Gly
 450 455 460
 Gln Met Val Ile Ser Thr Val Thr Met Trp Val Lys Gly
 465 470 475

<210> 5367

<211> 549

<212> DNA

<213> Homo sapiens

<400> 5367

nntcctcttc cccctcattc tcttccccct cgtcttcagg aggccggtgg gcaggagctg
 60

ggatctcggg tggctgcatg cgtgtctcct tgggggaagt ctcgggggaa gtaggctgtg
 120

gagtctcagg ggctggggat gctgcccccg aagcccccta cttttgggga gttcctgtcc
 180

cagcaciaag ctgaggccag cagccgcaga aggagaaaga gcagtcggcc ccaggccaag
 240

gcagcgccca gggcctacag tgaccatgat gaccgctggg agacaaaaga aggggcagca
 300

tccccagccc ctgagactcc acagcctact tccccgaga cttcccccaa ggagacaccc
 360

atcgagccac ccgagatccc agctcctgcc caccggcctc ctgaagacga gggggaagag
 420

aatgaggggg aagaggatga agaatgggag gacataagtg aggatgagga agaggaggag
 480

atcgaggtgg aagaaggtga tgaggaggaa ccagcccaag accaccaagc cccagaggct
 540

gccccacc
 549

<210> 5368

<211> 137
 <212> PRT
 <213> Homo sapiens

<400> 5368
 Met Leu Pro Pro Lys Pro Pro Thr Phe Gly Glu Phe Leu Ser Gln His
 1 5 10 15
 Lys Ala Glu Ala Ser Ser Arg Arg Arg Lys Ser Ser Arg Pro Gln
 20 25 30
 Ala Lys Ala Ala Pro Arg Ala Tyr Ser Asp His Asp Asp Arg Trp Glu
 35 40 45
 Thr Lys Glu Gly Ala Ala Ser Pro Ala Pro Glu Thr Pro Gln Pro Thr
 50 55 60
 Ser Pro Glu Thr Ser Pro Lys Glu Thr Pro Met Gln Pro Pro Glu Ile
 65 70 75 80
 Pro Ala Pro Ala His Arg Pro Pro Glu Asp Glu Gly Glu Glu Asn Glu
 85 90 95
 Gly Glu Glu Asp Glu Glu Trp Glu Asp Ile Ser Glu Asp Glu Glu Glu
 100 105 110
 Glu Glu Ile Glu Val Glu Glu Gly Asp Glu Glu Glu Pro Ala Gln Asp
 115 120 125
 His Gln Ala Pro Glu Ala Ala Pro Thr
 130 135

<210> 5369
 <211> 646
 <212> DNA
 <213> Homo sapiens

<400> 5369
 ngggaggcgg gaggcgcggc cgccgctcca gctgcgagtc cgcccgcgcg ccgcccgcgc
 60
 cgccgcgcgc tcggtcccgc gcccgccatg gcccgccctga cggagagcga ggcgcgcgcg
 120
 cagcagcagc agctcctgca gccgcggccc tcgcccgtgg gcagcagcgg gcccgagccc
 180
 cccggggggc agcccgcgcg catgaaggac ctggacgcga tcaaactctt cgtggggccag
 240
 atcccgcgcg acctggacga gaaggacctc aagccgctct tcgagcagtt cggccgcctc
 300
 tacgagctca cgggtgctca agacccttac acggggatgc acaaagggtg gcgcccggcc
 360
 cctccccccc tctccccctc cctccgcctc ccaccccacc ttccggcctc ttctctcccc
 420
 catcaccatc cctcctctgc tcacctccct cctctgcctg cctctgcgcg agcatcggtt
 480
 cttacccctc cctccccacc caccctcct cccctctctg ggggtgcagc tgacagatcc
 540
 gagcggggccc cctccccctc tccgccccct ctcctccct cccacacctc cggcatctcc
 600
 tctctctctc cctctctctc tccctctctc tctcccttct tcttct
 646

<210> 5370

<211> 148
 <212> PRT
 <213> Homo sapiens

<400> 5370
 Met Lys Asp Leu Asp Ala Ile Lys Leu Phe Val Gly Gln Ile Pro Arg
 1 5 10 15
 His Leu Asp Glu Lys Asp Leu Lys Pro Leu Phe Glu Gln Phe Gly Arg
 20 25 30
 Ile Tyr Glu Leu Thr Val Leu Lys Asp Pro Tyr Thr Gly Met His Lys
 35 40 45
 Gly Gly Arg Pro Ala Pro Ser Pro Leu Ser Pro Ser Leu Arg Leu Pro
 50 55 60
 Pro His Leu Pro Ala Ser Ser Leu Pro His His His Pro Ser Ser Ala
 65 70 75 80
 His Leu Pro Pro Leu Pro Ala Ser Ala Gly Ala Ser Val Leu Thr Pro
 85 90 95
 Ser Leu Pro Pro Thr Pro Pro Pro Leu Ser Gly Gly Ala Ala Asp Arg
 100 105 110
 Ser Glu Arg Ala Pro Ser Pro Pro Pro Pro Leu Pro Pro Ser Pro
 115 120 125
 Pro Ser Gly Ile Ser Ser Leu Ser Pro Ser Leu Ser Pro Ser Leu Ser
 130 135 140
 Pro Phe Leu Phe
 145

<210> 5371
 <211> 1177
 <212> DNA
 <213> Homo sapiens

<400> 5371
 nnacacagtg ccagcgccct catgtaccac cggaacgaga gcctacagcc cagcctgcag
 60
 agcccgcaaa cggagctgcg gtcggacttc cagtgcgttg tgggcttcgg gggcattcac
 120
 tccacgccgt ccaactgtct cagcgaccag gccaaagtatc taaacccctt actgggagag
 180
 tggaagcact tcaactgctc cctggccccc cgcattgtcca accagggcat cgcggtgctc
 240
 aacaattcg tatacttgat tggaggggac aacaatgtcc aaggatttcg agcagagtcc
 300
 cgatgctgga ggtatgaccc acggcacaac cgctggnttc cagatccagt ccctgcagca
 360
 ggagcacgcc gacctgtcnn cgtgtgtgtt gtaggcaggt acatctacgc tgtggcgggc
 420
 cgtgactacc acaatgacct gaatgctgtg gagcgctacg accctgccac caactcctgg
 480
 gcatactggt ccccaactcaa gagggaggtg tatgccacg caggcgcgac gctggagggg
 540
 aagatgtata tcacctgcgg ccgcagaggg gaggattacc tgaaagagac aactgctac
 600
 gatccaggca gcaacacttg gcacacactg gctgatgggc ctgtgcggcg cgcctggcac
 660

ggcattggcaa ccctcctcaa caagctgtat gtgategggg gcagcaacaa cgatgccgga
 720
 tacaggaggg acgtgcacca ggtggcctgc tacagctgca cgtctggaca gtggtcatct
 780
 gtctgcccac tccctgctgg gcacggtgag cctggcattg ctgtgctgga caacaggatc
 840
 tatgtgttag gtggccgctc acacaaccgc ggcagccgca caggctacgt gcacatttac
 900
 gatgtggaga aggactgctg ggaggaaggg cccagctgg acaactccat ctcaggcctg
 960
 gcggcctgtg tgctcaccct gccccgctcc ctgctccttg agccgccccg cgggaccct
 1020
 gaccgcagcc aggccgaccc ggactttgcc tctgaggtga tgagtgtgtc tgactgggag
 1080
 gagtttgaca actccagtga ggactaggct ccctgtgcct ggcattcagag ggaagggagg
 1140
 ctggggctgc agggcagtga aaccacgca gcctagg
 1177

<210> 5372

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5372

Xaa	His	Ser	Ala	Ser	Ala	Leu	Met	Tyr	His	Arg	Asn	Glu	Ser	Leu	Gln
1				5					10					15	
Pro	Ser	Leu	Gln	Ser	Pro	Gln	Thr	Glu	Leu	Arg	Ser	Asp	Phe	Gln	Cys
		20						25					30		
Val	Val	Gly	Phe	Gly	Gly	Ile	His	Ser	Thr	Pro	Ser	Thr	Val	Leu	Ser
		35				40						45			
Asp	Gln	Ala	Lys	Tyr	Leu	Asn	Pro	Leu	Leu	Gly	Glu	Trp	Lys	His	Phe
	50					55					60				
Thr	Ala	Ser	Leu	Ala	Pro	Arg	Met	Ser	Asn	Gln	Gly	Ile	Ala	Val	Leu
65					70					75				80	
Asn	Asn	Phe	Val	Tyr	Leu	Ile	Gly	Gly	Asp	Asn	Asn	Val	Gln	Gly	Phe
			85					90						95	
Arg	Ala	Glu	Ser	Arg	Cys	Trp	Arg	Tyr	Asp	Pro	Arg	His	Asn	Arg	Trp
			100					105					110		
Xaa	Pro	Asp	Pro	Val	Pro	Ala	Ala	Gly	Ala	Arg	Arg	Pro	Val	Xaa	Val
		115				120						125			
Cys	Val	Val	Gly	Arg	Tyr	Ile	Tyr	Ala	Val	Ala	Gly	Arg	Asp	Tyr	His
	130					135					140				
Asn	Asp	Leu	Asn	Ala	Val	Glu	Arg	Tyr	Asp	Pro	Ala	Thr	Asn	Ser	Trp
145					150				155					160	
Ala	Tyr	Val	Ala	Pro	Leu	Lys	Arg	Glu	Val	Tyr	Ala	His	Ala	Gly	Ala
				165					170					175	
Thr	Leu	Glu	Gly	Lys	Met	Tyr	Ile	Thr	Cys	Gly	Arg	Arg	Gly	Glu	Asp
			180					185					190		
Tyr	Leu	Lys	Glu	Thr	His	Cys	Tyr	Asp	Pro	Gly	Ser	Asn	Thr	Trp	His
		195				200						205			
Thr	Leu	Ala	Asp	Gly	Pro	Val	Arg	Arg	Ala	Trp	His	Gly	Met	Ala	Thr
	210					215					220				
Leu	Leu	Asn	Lys	Leu	Tyr	Val	Ile	Gly	Gly	Ser	Asn	Asn	Asp	Ala	Gly

225		230		235		240									
Tyr	Arg	Arg	Asp	Val	His	Gln	Val	Ala	Cys	Tyr	Ser	Cys	Thr	Ser	Gly
		245		250		255									
Gln	Trp	Ser	Ser	Val	Cys	Pro	Leu	Pro	Ala	Gly	His	Gly	Glu	Pro	Gly
		260		265		270									
Ile	Ala	Val	Leu	Asp	Asn	Arg	Ile	Tyr	Val	Leu	Gly	Gly	Arg	Ser	His
		275		280		285									
Asn	Arg	Gly	Ser	Arg	Thr	Gly	Tyr	Val	His	Ile	Tyr	Asp	Val	Glu	Lys
		290		295		300									
Asp	Cys	Trp	Glu	Glu	Gly	Pro	Gln	Leu	Asp	Asn	Ser	Ile	Ser	Gly	Leu
305				310		315								320	
Ala	Ala	Cys	Val	Leu	Thr	Leu	Pro	Arg	Ser	Leu	Leu	Leu	Glu	Pro	Pro
			325			330								335	
Arg	Gly	Thr	Pro	Asp	Arg	Ser	Gln	Ala	Asp	Pro	Asp	Phe	Ala	Ser	Glu
		340		345		350									
Val	Met	Ser	Val	Ser	Asp	Trp	Glu	Glu	Phe	Asp	Asn	Ser	Ser	Glu	Asp
		355		360		365									

<210> 5373

<211> 4221

<212> DNA

<213> Homo sapiens

<400> 5373

cgggtgctggc cccggcgagg tagcttctgg aaggcgctgc tcttccggtt ctctgtcccg
 60
 gttcctgggg ttgcacagac agaccctgta aacatgtcag ggttcagtcc ggaactcatc
 120
 gactacttgg aagggaaaat ctcttttgag gagttcgaac ggcgagaga agagagaaaa
 180
 acccgcgaga agaaaagtct tcaggaaaaa ggcaagttat cagctgaaga aaatcccgat
 240
 gactctgaag ttccatcatc atcaggaatt aactctacca aatcccaaga caaagatgtc
 300
 aatgaaggag aaacatcaga tggagtgagg aagtcagttc acaaggtctt tgcttccatg
 360
 cttggagaga atgaagatga tgaggaggaa gaggaagaag aggaggagga ggaggaggag
 420
 gaagaaacac ctgagcaacc cactgcgggc gatgtatttg tattggagat ggttctcaat
 480
 cgtgaaacca agaaaatgat gaaagagaaa aggcctcgga gtaaacttcc cagagctctg
 540
 agaggtctca tgggtgaagc caacattcgt tttgctcgag gagaacgtga agaggcgata
 600
 ttgatgtgca tggaaatcat aagacaagct cctctggctt atgagccatt ctctactcta
 660
 gccatgatat atgaggacca aggtgacatg gaaaaatcat tgcagtttga gttgattgct
 720
 gcgcatttaa atcccagtga cacagaagaa tgggtagac tggcagaaat gtctctggaa
 780
 caagacaata ttaagcaggc tattttttgc tatacaaaag ctcttaaata tgaacctact
 840
 aatgtccggt atctgtggga gcgatcaagc ctttatgaac agatgggtga tcataaaatg
 900

gccatggatg gttataggcg tattttaaac cttttgtctc catctgatgg cgaacgtttt
960
atgcagctgg ctagagatat ggcaaagagt tactatgaag ccaatgatgt tactttctgct
1020
attaacataa ttgatgaagc tttctcaaaa caccagggcc tagtctccat ggaagatgtt
1080
aacatagcag ctgaactata tatttctaac aaacagtatg acaaagcttt ggagataatt
1140
acagattttt ctggaattgt gctggaaaaa aaaacttcag aagaaggcac ctcagaagag
1200
aataaagctc ctgagaatgt tacctgcact atacctgatg gcgtgccaat agatatcaca
1260
gtgaagttga tggctctgcct tgtacatctc aacattcttg aaccacttaa tcctctcttg
1320
acaacactag tagaacagaa tcctgaagat atgggagacc tatacctaga tgttgctgaa
1380
gcttttctgg atgttggtga atataattct gcacttcccc tcctcagtgc tcttgtttgc
1440
tctgaaagat acaaccttgc agtagtttgg cttcgtcatg cagaatgttt aaaggcctta
1500
ggctatatgg agcgagctgc tgaaagctat ggcaagggtg ttgatctggc cccactccat
1560
ttggatgcaa ggatttcact ttctaccctt cagcagcagc tgggccagcc tgagaaagct
1620
ctggaagctc tggaaccaat gtatgatcca gatactttag cacaggatgc aaatgctgca
1680
cagcaggaac tgaagttatt gcttcacgt tctactctgt tgttttcaca aggcaaaatg
1740
tatggttatg tggatacctt acttactatg ttagccatgc ttttaaagggt agcaatgaat
1800
cgagcccaag tttgtttgat atccagttcc aagtctggag agaggcatct ttatcttatt
1860
aaagtatcga gagacaaaat atcagacagc aatgaccaag agtcagcaaa ttgtgatgca
1920
aaagcaatat ttgctgtgct cacaagcgtc ttgacaaagg atgactggtg gaatcttctg
1980
ttgaaggcca tatactcctt atgtgacctt tcccgatttc aagaggctga gttgcttgta
2040
gattcctcat tggaatatta ctcatcttat gatgacaggc aaaaacgcaa agaactagaa
2100
tactttggtc tgtctgctgc aattctggac aaaaatttca gaaaggcata caactatctc
2160
aggataatgg taatggaaaa tgtcaataaa cccagctct ggaacatttt caatcaagtt
2220
accatgcact cccaagatgt acgacatcat cgcttctgtc tccgtttgat gctgaaaaac
2280
ccagaaaatc atgccctatg tgtcttaaat ggacacaatg catttgatctc tggtagtttt
2340
aagcatgcgc ttggacagta tgtgcaagcc ttctgcactc accctgacga acctctctat
2400
agcttctgta taggcctaac ctttattcat atggcatctc agaagtatgt gttacggaga
2460
catgctctta ttgtacaggg cttttccttt cttaatcgat acctcagttt acgtgggccc
2520

tgccaggaat cattctacaa tttgggcccgt ggccttcac agttggggct gattcatctt
2580
gcaatccact attatcagaa ggccctggag ctccctccac ttgtggtaga gggtagataa
2640
cttgaccagt tagacttacg aagagatatt gcctacaact tgtctctcat ctatcagagc
2700
agtgggaata ccggaatggc tcaaacgctt ttgtatacct attgttctat ataaagcacc
2760
gcaactgaga acagagcaat ggcagctgct gtgtgaggac cagtgtcttc tgtctcaggg
2820
cttattatctt gtaactccaa aatagaaatg acaatttcag aattaccta caaacagtgt
2880
atttattttt aatatgtgat aatgatcttg tggtagatat gcaaaattat tcctacaaaa
2940
attttagtat tggtagtca ttttctcttc acattctata gtgaattgtt cccaatgttg
3000
aaatggacgt gtaagccttt gagctagctt ggagtcgaat acactatttt tcaactcacac
3060
catttattca tctttgtatt taatactata gctctgtcaa tatcacatga ggcagttttt
3120
caaatacgtg taaacagagg ttgcttatta ttaaaggaaa gacaaagtgg gactctttat
3180
gatgtcatga ccatgataac taagcaccta agaaaattat ttaaaatagt tatgtgtag
3240
gcagaaagac aaataattta gttttttact tttcaccagc atgtatctta gctaccta
3300
ctgaaacatg ggaggctggg cttaattcaa aatatattgc tccaaggcaa ataaaaaat
3360
gctttatcta tatttgggc tttctgatga aaaaatagag aagagcttgt tcaataacag
3420
gacatggttt ccatttcaag atcacaagta atataagact gggcaagtag tacgtatgga
3480
ataaaggaca tactgctgat tgataaagta aaaaactttt tttttttgtt tgtttactca
3540
tctccactat ttattatag ttcttgaatt taagttaaca gtacttttta gatgatatac
3600
tgtagctta ataacaactt tttagggaaa aataaatgct gtaattaatg tgcacatggg
3660
ttagtaacac ccagcccaat tgtgggaggg aaacaagtag aggcttagga tcaaagaaat
3720
aaaattggga cttattagaa attcttacca ctgtttctac tgtacacaaa actttctagt
3780
tgagcagaat ttgtatgcaa taagtaaata tattgtatac tccatgtgta taatttaa
3840
gcattttatt ttataattg aggttaactg tttcacatgc ttaattttta ctttatgcca
3900
tttataggta atggtagagg taactgagat acagtaataa gttagacttg tgtgttgga
3960
ttctgtggaa ctgagcatc tgtgctccga gtttctctct taaattagct cactggactg
4020
tggctccagt gtctactaaa tagccgtgga ggaaataagt ctccctgttt tatgcactga
4080
gactctgctg ctctgcatg atcacagttg atcaggaggg gagtctgctc ctgaaccaac
4140

ctgggccaat caggagtttc ctccgcctt ccctgggaat ttcagacttg aaatagttca
 4200
 tgtagggcca gaacttcaga a
 4221

<210> 5374

<211> 886

<212> PRT

<213> Homo sapiens

<400> 5374

Met	Ser	Gly	Phe	Ser	Pro	Glu	Leu	Ile	Asp	Tyr	Leu	Glu	Gly	Lys	Ile
1				5					10					15	
Ser	Phe	Glu	Glu	Phe	Glu	Arg	Arg	Arg	Glu	Glu	Arg	Lys	Thr	Arg	Glu
		20					25						30		
Lys	Lys	Ser	Leu	Gln	Glu	Lys	Gly	Lys	Leu	Ser	Ala	Glu	Glu	Asn	Pro
		35					40					45			
Asp	Asp	Ser	Glu	Val	Pro	Ser	Ser	Ser	Gly	Ile	Asn	Ser	Thr	Lys	Ser
	50					55					60				
Gln	Asp	Lys	Asp	Val	Asn	Glu	Gly	Glu	Thr	Ser	Asp	Gly	Val	Arg	Lys
65					70					75					80
Ser	Val	His	Lys	Val	Phe	Ala	Ser	Met	Leu	Gly	Glu	Asn	Glu	Asp	Asp
				85					90					95	
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Thr
				100					105					110	
Pro	Glu	Gln	Pro	Thr	Ala	Gly	Asp	Val	Phe	Val	Leu	Glu	Met	Val	Leu
				115			120						125		
Asn	Arg	Glu	Thr	Lys	Lys	Met	Met	Lys	Glu	Lys	Arg	Pro	Arg	Ser	Lys
						135					140				
Leu	Pro	Arg	Ala	Leu	Arg	Gly	Leu	Met	Gly	Glu	Ala	Asn	Ile	Arg	Phe
145					150					155					160
Ala	Arg	Gly	Glu	Arg	Glu	Glu	Ala	Ile	Leu	Met	Cys	Met	Glu	Ile	Ile
				165					170					175	
Arg	Gln	Ala	Pro	Leu	Ala	Tyr	Glu	Pro	Phe	Ser	Thr	Leu	Ala	Met	Ile
				180					185					190	
Tyr	Glu	Asp	Gln	Gly	Asp	Met	Glu	Lys	Ser	Leu	Gln	Phe	Glu	Leu	Ile
		195					200					205			
Ala	Ala	His	Leu	Asn	Pro	Ser	Asp	Thr	Glu	Glu	Trp	Val	Arg	Leu	Ala
		210				215					220				
Glu	Met	Ser	Leu	Glu	Gln	Asp	Asn	Ile	Lys	Gln	Ala	Ile	Phe	Cys	Tyr
225					230					235					240
Thr	Lys	Ala	Leu	Lys	Tyr	Glu	Pro	Thr	Asn	Val	Arg	Tyr	Leu	Trp	Glu
				245					250					255	
Arg	Ser	Ser	Leu	Tyr	Glu	Gln	Met	Gly	Asp	His	Lys	Met	Ala	Met	Asp
			260					265					270		
Gly	Tyr	Arg	Arg	Ile	Leu	Asn	Leu	Leu	Ser	Pro	Ser	Asp	Gly	Glu	Arg
		275					280					285			
Phe	Met	Gln	Leu	Ala	Arg	Asp	Met	Ala	Lys	Ser	Tyr	Tyr	Glu	Ala	Asn
		290				295					300				
Asp	Val	Thr	Ser	Ala	Ile	Asn	Ile	Ile	Asp	Glu	Ala	Phe	Ser	Lys	His
305					310					315					320
Gln	Gly	Leu	Val	Ser	Met	Glu	Asp	Val	Asn	Ile	Ala	Ala	Glu	Leu	Tyr
				325					330					335	
Ile	Ser	Asn	Lys	Gln	Tyr	Asp	Lys	Ala	Leu	Glu	Ile	Ile	Thr	Asp	Phe

				340					345					350		
Ser	Gly	Ile	Val	Leu	Glu	Lys	Lys	Thr	Ser	Glu	Glu	Gly	Thr	Ser	Glu	
		355					360					365				
Glu	Asn	Lys	Ala	Pro	Glu	Asn	Val	Thr	Cys	Thr	Ile	Pro	Asp	Gly	Val	
	370					375					380					
Pro	Ile	Asp	Ile	Thr	Val	Lys	Leu	Met	Val	Cys	Leu	Val	His	Leu	Asn	
385					390					395					400	
Ile	Leu	Glu	Pro	Leu	Asn	Pro	Leu	Leu	Thr	Thr	Leu	Val	Glu	Gln	Asn	
			405						410						415	
Pro	Glu	Asp	Met	Gly	Asp	Leu	Tyr	Leu	Asp	Val	Ala	Glu	Ala	Phe	Leu	
			420					425					430			
Asp	Val	Gly	Glu	Tyr	Asn	Ser	Ala	Leu	Pro	Leu	Leu	Ser	Ala	Leu	Val	
	435						440					445				
Cys	Ser	Glu	Arg	Tyr	Asn	Leu	Ala	Val	Val	Trp	Leu	Arg	His	Ala	Glu	
	450					455					460					
Cys	Leu	Lys	Ala	Leu	Gly	Tyr	Met	Glu	Arg	Ala	Ala	Glu	Ser	Tyr	Gly	
465					470					475					480	
Lys	Val	Val	Asp	Leu	Ala	Pro	Leu	His	Leu	Asp	Ala	Arg	Ile	Ser	Leu	
			485						490					495		
Ser	Thr	Leu	Gln	Gln	Gln	Leu	Gly	Gln	Pro	Glu	Lys	Ala	Leu	Glu	Ala	
			500					505					510			
Leu	Glu	Pro	Met	Tyr	Asp	Pro	Asp	Thr	Leu	Ala	Gln	Asp	Ala	Asn	Ala	
	515						520					525				
Ala	Gln	Gln	Glu	Leu	Lys	Leu	Leu	Leu	His	Arg	Ser	Thr	Leu	Leu	Phe	
	530					535					540					
Ser	Gln	Gly	Lys	Met	Tyr	Gly	Tyr	Val	Asp	Thr	Leu	Leu	Thr	Met	Leu	
545					550					555					560	
Ala	Met	Leu	Leu	Lys	Val	Ala	Met	Asn	Arg	Ala	Gln	Val	Cys	Leu	Ile	
			565						570					575		
Ser	Ser	Ser	Lys	Ser	Gly	Glu	Arg	His	Leu	Tyr	Leu	Ile	Lys	Val	Ser	
			580					585					590			
Arg	Asp	Lys	Ile	Ser	Asp	Ser	Asn	Asp	Gln	Glu	Ser	Ala	Asn	Cys	Asp	
		595					600						605			
Ala	Lys	Ala	Ile	Phe	Ala	Val	Leu	Thr	Ser	Val	Leu	Thr	Lys	Asp	Asp	
	610					615					620					
Trp	Trp	Asn	Leu	Leu	Leu	Lys	Ala	Ile	Tyr	Ser	Leu	Cys	Asp	Leu	Ser	
625					630					635					640	
Arg	Phe	Gln	Glu	Ala	Glu	Leu	Leu	Val	Asp	Ser	Ser	Leu	Glu	Tyr	Tyr	
			645						650					655		
Ser	Phe	Tyr	Asp	Asp	Arg	Gln	Lys	Arg	Lys	Glu	Leu	Glu	Tyr	Phe	Gly	
			660					665					670			
Leu	Ser	Ala	Ala	Ile	Leu	Asp	Lys	Asn	Phe	Arg	Lys	Ala	Tyr	Asn	Tyr	
</																

```

      770              775              780
Tyr Val Leu Arg Arg His Ala Leu Ile Val Gln Gly Phe Ser Phe Leu
785              790              795              800
Asn Arg Tyr Leu Ser Leu Arg Gly Pro Cys Gln Glu Ser Phe Tyr Asn
      805              810              815
Leu Gly Arg Gly Leu His Gln Leu Gly Leu Ile His Leu Ala Ile His
      820              825              830
Tyr Tyr Gln Lys Ala Leu Glu Leu Pro Pro Leu Val Val Glu Gly Ile
      835              840              845
Glu Leu Asp Gln Leu Asp Leu Arg Arg Asp Ile Ala Tyr Asn Leu Ser
      850              855              860
Leu Ile Tyr Gln Ser Ser Gly Asn Thr Gly Met Ala Gln Thr Leu Leu
865              870              875              880
Tyr Thr Tyr Cys Ser Ile
      885

```

<210> 5375
 <211> 526
 <212> DNA
 <213> Homo sapiens

```

<400> 5375
ctctaggaac ccctccaagt ggctcgggtgt cgccctcagc ttttctaaag ggatggatga
60
taggggtcagg ggtagaggat ttgtgatcct tcaagtttgc agggcttccc gtgttctaag
120
tggtaacgat ctgtcttctg caaatgggtt acagcgtgct gctgccagtt ctgaatcccc
180
agtagcccg agttgggtgc agttgaaatc catttccctt tttgccttta gtgaggcatc
240
ccctcctcc ttattaaaga agaatacatg tcgctgccat ttgccacgta ttgccatag
300
accaggact attagcatct ttaaccacg taaccacact ggggatggct ggggaatggt
360
catgtcccca ttttacagga gtggtgatta aggctcaaag gatggaggtg atggatcaaa
420
gtcgtctgcc aagtgggtggc agcattgggt ctcagaccga ggcccgtcta cacagtgtctg
480
tgcctcctcc caccacgaat gcacgtggcc cactctgccc acgcgt
526

```

<210> 5376
 <211> 112
 <212> PRT
 <213> Homo sapiens

```

<400> 5376
Met Asp Asp Arg Val Arg Gly Arg Gly Phe Val Ile Leu Gln Val Cys
1      5      10      15
Arg Ala Ser Arg Val Leu Ser Gly Asn Asp Leu Ser Ser Ala Asn Gly
20      25      30
Leu Gln Arg Ala Ala Ala Ser Ser Glu Ser Pro Val Ala Arg Thr Trp
35      40      45
Val Gln Leu Lys Ser Ile Ser Leu Phe Ala Phe Ser Glu Ala Ser Pro

```


50		55		60
Ser Ser Leu Leu Lys Lys Asn Thr Cys Arg Cys His Leu Pro Arg Ile				
65	70	75	80	
Cys His Arg Pro Arg Thr Ile Ser Ile Phe Asn Pro Arg Asn His Thr				
	85	90	95	
Gly Asp Gly Trp Gly Met Phe Met Ser Pro Phe Tyr Arg Ser Gly Asp				
100	105	110		

<210> 5377

<211> 1452

<212> DNA

<213> Homo sapiens

<400> 5377

```

nctcgagctg ggtcccgatt cagacatgaa atatccttta catgggtgtcc atccatgtat
60
cttgtggcgg cctcggcagc ggtgttctcg cgcttgcgaa gcgggctccg gctcggctcg
120
cggggactgt gcacgaggtt ggcgacccg ccccgccggg ccccgatca ggccgcagag
180
atcgggagcc gcgggagcac taaggcgcaa gggccacagc agcagccggg ctcagagggt
240
cccagctatg ccaaaaaagt tgcgctctgg cttgctgggc tgcttgagc tgggtggact
300
gtgagcgctg tctatatctt tggaacaac ccggtggacg aaaatggtgc caagattcct
360
gatgagttcg acaatgatcc aattctggta cagcagttgc gccggacata caaatatttc
420
aaagattata gacagatgat catcgagccc accagccctt gccttctccc agaccctctg
480
caggaaccgt actaccagcc accctacacg ctcgttttgg agctcaccgg cgteectctg
540
catcctgagt ggtcgctggc cactggctgg aggtttaaga agcgcccagg catcgagacc
600
ttgttcagc agcttgcccc tttatatgaa attgtcatct ttacgtcaga gactggcatg
660
actgcgtttc cactcattga tagtgtggac ccccatggct tcatctccta ccgcctattc
720
cgggacgcca caagatacat ggatggacac catgtaaagg atatttcatg tctgaatcgg
780
gaccagctc gagtagtagt tgtggactgc aagaaggaag ccttccgcct gcagccctat
840
aacggcggtt ccctgcggcc ctgggacggc aactctgatg accgggtctt gttggatctg
900
tctgccttcc tcaagaccat tgcactgaat ggtgtggagg acgtgcgaac cgtgctggag
960
cactatgccc tggaggatga ccgctggcg gctttcaaac agcggcaaag ccggctagag
1020
caggaggagc agcagcgctt ggccgagctc tccaagtcca acaagcagaa cctcttcctt
1080
ggctccctca ccagccgctt gtggcctcgc tccaaacagc cctgaactct gggcctcctc
1140
aaactcagt cctgggtcca gggccccagt gcttcagac caagacttgg gccaccactt
1200

```

gtccaataaaa gtacatccca gacgccacac ctgctgtgtc ccgagagtct ccagatgggg
 1260
 gcatcagggt gaggtccggg actcttgggt catcgtecca cagtgggtga tcggctgcc
 1320
 agcacagtgg ggggtgctttg ttggatcaga gcagattttt caccctgggtc tcggaatcta
 1380
 aaaaccctcg ctgtgtcttc ctgtgtgttg cgtgatctgt gaaaaatata tctccctctg
 1440
 accaaaaaaa aa
 1452

<210> 5378

<211> 374

<212> PRT

<213> Homo sapiens

<400> 5378

Xaa	Arg	Ala	Gly	Ser	Arg	Phe	Arg	His	Glu	Ile	Ser	Phe	Thr	Trp	Cys
1				5					10					15	
Pro	Ser	Met	Tyr	Leu	Val	Ala	Ala	Ser	Ala	Ala	Val	Phe	Ser	Arg	Leu
			20					25					30		
Arg	Ser	Gly	Leu	Arg	Leu	Gly	Ser	Arg	Gly	Leu	Cys	Thr	Arg	Leu	Ala
		35					40					45			
Thr	Pro	Pro	Arg	Arg	Ala	Pro	Asp	Gln	Ala	Ala	Glu	Ile	Gly	Ser	Arg
		50				55					60				
Gly	Ser	Thr	Lys	Ala	Gln	Gly	Pro	Gln	Gln	Gln	Pro	Gly	Ser	Glu	Gly
65					70				75					80	
Pro	Ser	Tyr	Ala	Lys	Lys	Val	Ala	Leu	Trp	Leu	Ala	Gly	Leu	Leu	Gly
				85					90					95	
Ala	Gly	Gly	Thr	Val	Ser	Val	Val	Tyr	Ile	Phe	Gly	Asn	Asn	Pro	Val
			100					105					110		
Asp	Glu	Asn	Gly	Ala	Lys	Ile	Pro	Asp	Glu	Phe	Asp	Asn	Asp	Pro	Ile
		115					120					125			
Leu	Val	Gln	Gln	Leu	Arg	Arg	Thr	Tyr	Lys	Tyr	Phe	Lys	Asp	Tyr	Arg
						135					140				
Gln	Met	Ile	Ile	Glu	Pro	Thr	Ser	Pro	Cys	Leu	Leu	Pro	Asp	Pro	Leu
145					150					155				160	
Gln	Glu	Pro	Tyr	Tyr	Gln	Pro	Pro	Tyr	Thr	Leu	Val	Leu	Glu	Leu	Thr
				165					170					175	
Gly	Val	Leu	Leu	His	Pro	Glu	Trp	Ser	Leu	Ala	Thr	Gly	Trp	Arg	Phe
			180					185					190		
Lys	Lys	Arg	Pro	Gly	Ile	Glu	Thr	Leu	Phe	Gln	Gln	Leu	Ala	Pro	Leu
		195					200					205			
Tyr	Glu	Ile	Val	Ile	Phe	Thr	Ser	Glu	Thr	Gly	Met	Thr	Ala	Phe	Pro
		210				215					220				
Leu	Ile	Asp	Ser	Val	Asp	Pro	His	Gly	Phe	Ile	Ser	Tyr	Arg	Leu	Phe
225					230				235					240	
Arg	Asp	Ala	Thr	Arg	Tyr	Met	Asp	Gly	His	His	Val	Lys	Asp	Ile	Ser
				245					250					255	
Cys	Leu	Asn	Arg	Asp	Pro	Ala	Arg	Val	Val	Val	Val	Asp	Cys	Lys	Lys
			260					265					270		
Glu	Ala	Phe	Arg	Leu	Gln	Pro	Tyr	Asn	Gly	Val	Ala	Leu	Arg	Pro	Trp
		275				280						285			
Asp	Gly	Asn	Ser	Asp	Asp	Arg	Val	Leu	Leu	Asp	Leu	Ser	Ala	Phe	Leu

290	295	300
Lys Thr Ile Ala Leu Asn Gly Val Glu Asp Val Arg Thr Val Leu Glu		
305	310	315
His Tyr Ala Leu Glu Asp Asp Pro Leu Ala Ala Phe Lys Gln Arg Gln		320
	325	330
Ser Arg Leu Glu Gln Glu Glu Gln Arg Leu Ala Glu Leu Ser Lys		335
	340	345
Ser Asn Lys Gln Asn Leu Phe Leu Gly Ser Leu Thr Ser Arg Leu Trp		350
	355	360
Pro Arg Ser Lys Gln Pro		365
370		

<210> 5379

<211> 3213

<212> DNA

<213> Homo sapiens

<400> 5379

```

naggcgtcac tcaatatccc tgcagtggcg gccgcccatg tgatcaaacg gtatacagcc
60
caggcgccag atgagctgtc ctttgagggtg aggctgtggg gaagcagatt ccagctgggc
120
tccccacacc ccctgtctct tctgaccctt ctcttcccac ccgccctctc ccaggtggga
180
gacattgtct cggatgatcga catgccaccc acagaggatc ggagctgggtg gcggggcaag
240
cgaggcttcc agctgtgccg cggcctcgtg ggaagctggc cggcctgctc cgcaccttca
300
tgcgctcccc cccttctcgg cagcggctgc ggcagcgggg aatcctgcga cagagggtgt
360
ttggctgcga tcttggcgag cacctcagca actcaggcca ggatggtgct gcgctgctgc
420
tccgagttca ttgaggccca cggggtgggt gatgggatct accggtctctc aggcgtgtct
480
tccaacatcc agaggcttcg gcacgagttt gacagtgaga ggatcccga gctgtctggc
540
cctgcattcc tgcaggacat ccacagcgtg tcctccctct gcaagctcta cttccgagag
600
cttccgaacc ctctgtcac ctaccagctc tatgggaagt tcagtagggc catgtcagtg
660
cctggggagg aggagcgtct ggtgcgggtg cacgatgtca tccagcagct gccccacca
720
cattacagga ccctggagta cctgctgagg cacctggccc gcatggcgag acacagtgcc
780
aacaccagca tgcatgcccc caacctggcc attgtctggg cacccaacct gctacggtcc
840
atggagctgg agtcagtggg aatgggtggc gcggcggcgt tccgggaagt tcgggtgcag
900
tcgggtgggtg tggagtttct gctcaccat gtggacgtcc tgttcagcga caccttcacc
960
tccgcgggcc tcgacctgc aggcgctgc ctgctcccca ggcccaagtc ccttgcgggc
1020
agctgcccc caccgcct gctgacgtg gaggaagccc aggcacgcac ccagggccgg
1080

```

ctggggacgc ccacggagcc cacaactccc aaggccccgg cctcacctgc ggaaaggagg
1140
aaaggggaga gaggggagaa gcagcggaag ccagggggca gcagctggaa gacgttcttt
1200
gcactgggccc ggggccccag tgtccctcga aagaagcccc tgccctggct ggggggcacc
1260
cgtgccccac cgcagccttc agcctggcta gatgatggtg atgagctgga cttcagccca
1320
ccccgctgcc tggagggact ccgggggctg gactttgatc ccttaacctt ccgctgcagc
1380
agccccaccc caggggatcc cgcacctccc gccagcccag cccccccgc ccctgcctct
1440
gccttccac ccagggtgac ccccaggcc atctcgcccc gggggccac cagccccgc
1500
tcgctgctg ccctagacat ctcagagccc ctggctgtat cagtgccacc cgctgtccta
1560
gaactgctgg gggctggggg agcacctgcc tcagccaccc caacaccagc tctcagcccc
1620
ggccggagcc tgcgccccca tctcataccc ctgctgctgc gaggagccga gggcccgctg
1680
actgacgcct gccagcagga gatgtgcagc aagctccggg gagcccaggg ccactcgcga
1740
cgctcatgg ccctggccct ggctgagcgg gctcagcagg tggccgagca acagagccag
1800
caggagtgtg ggggcacccc acctgcttcc caatccccct tccaccgctc gctgtctctg
1860
gaggtgggcg gggagcccct ggggacctca gggagtgggc cacctccaa ctccctagca
1920
caccggggtg cctgggtccc gggacccccca ccctacttac caaggcaaca aagtgatggg
1980
agcctgctga ggagccagcg gcccatgggg acctcaagga ggggactccg aggccctgcc
2040
caggtcagtg ccagctcag ggcaggtggc gggggcaggg atgcgccaga ggcagcagcc
2100
cagtccccat gttctgtccc ctcacaggtt cctacccccg gcttcttctc ccagcccc
2160
agggagtgcc tgccaccctt cctcggggtc cccaagccag gcttgtaacc cctgggcccc
2220
ccatccttcc agcccagttc ccagccccca gtctggagga gctctctggg cccccctgca
2280
ccactcgaca ggggagagaa cctgtactat gagatcgggg caagtgaggg gtccccctat
2340
tctggcccca ccgctcctg gagtcccttt cgctccatgc cccccgacag gctcaatgcc
2400
tcctacggca tgcttgcca atcaccccca ctccacaggt ccccgactt cctgctcagc
2460
taccgcccag cccctcctg ctttccccct gaccacctg gctactcagc cccccagcac
2520
cctgctcggc gccctacacc gcctgagccc ctctacgtca acctagctct agggcccagg
2580
ggtcctcac ctgcctcttc ctctctctt tcccctcctg cccacccccg aagccgttca
2640
gateccggtc cccagctccc ccgccttccc cagaaacaac gggcaccctg gggaccccg
2700

acccctcata ggggtgccggg tccctggggc cctcctgagc ctctcctgct ctacagggca
 2760
 gccccgccag cctacggaag ggggggagag ctccaccgag ggtccttgta cagaaatgga
 2820
 gggcaaagag gggagggggc tgggtcccca ccccttacc ccactcccag ctgggtccctc
 2880
 cactctgagg gccagaccg aagctactgc tgagcaccag ctgggagggg ccgtccttcc
 2940
 ttcccttcac cctcactgga tcttggecca accaaatccc ttgttttgta tttcttgaa
 3000
 ccccgaccac taccccaggt ttctaacttt gtaacttgct tctgatgtgg gtccttaacc
 3060
 tataatctca gttccctac cctggactga agggctctgcc catcccccca ccaccctcca
 3120
 tcctgggggc cctgcacaaa atctgggggtg ggaggggcta ggctgacccc atcctcctct
 3180
 ccctccagga gccccagca tgcctgacc tgt
 3213

<210> 5380

<211> 903

<212> PRT

<213> Homo sapiens

<400> 5380

Met	Pro	Pro	Thr	Glu	Asp	Arg	Ser	Trp	Trp	Arg	Gly	Lys	Arg	Gly	Phe
1				5				10					15		
Gln	Leu	Cys	His	Gly	Leu	Val	Gly	Ser	Trp	Pro	Ala	Cys	Ser	Ala	Pro
			20					25					30		
Ser	Cys	Ala	Pro	Ala	Leu	Leu	Gly	Ser	Gly	Cys	Gly	Ser	Gly	Glu	Ser
		35					40					45			
Cys	Asp	Arg	Gly	Cys	Leu	Ala	Ile	Leu	Ala	Ser	Thr	Ser	Ala	Thr	
	50					55				60					
Gln	Ala	Arg	Met	Val	Leu	Arg	Cys	Cys	Ser	Glu	Phe	Ile	Glu	Ala	His
	65				70					75					80
Gly	Val	Val	Asp	Gly	Ile	Tyr	Arg	Leu	Ser	Gly	Val	Ser	Ser	Asn	Ile
			85					90						95	
Gln	Arg	Leu	Arg	His	Glu	Phe	Asp	Ser	Glu	Arg	Ile	Pro	Glu	Leu	Ser
			100					105					110		
Gly	Pro	Ala	Phe	Leu	Gln	Asp	Ile	His	Ser	Val	Ser	Ser	Leu	Cys	Lys
		115				120						125			
Leu	Tyr	Phe	Arg	Glu	Leu	Pro	Asn	Pro	Leu	Leu	Thr	Tyr	Gln	Leu	Tyr
	130					135					140				
Gly	Lys	Phe	Ser	Glu	Ala	Met	Ser	Val	Pro	Gly	Glu	Glu	Glu	Arg	Leu
	145				150					155				160	
Val	Arg	Val	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg
			165					170						175	
Thr	Leu	Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser
			180					185					190		
Ala	Asn	Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro
		195					200					205			
Asn	Leu	Leu	Arg	Ser	Met	Glu	Leu	Glu	Ser	Val	Gly	Met	Gly	Gly	Ala
	210					215					220				
Ala	Ala	Phe	Arg	Glu	Val	Arg	Val	Gln	Ser	Val	Val	Val	Glu	Phe	Leu

225						230						235						240
Leu	Thr	His	Val	Asp	Val	Leu	Phe	Ser	Asp	Thr	Phe	Thr	Ser	Ala	Gly			
					245						250						255	
Leu	Asp	Pro	Ala	Gly	Arg	Cys	Leu	Leu	Pro	Arg	Pro	Lys	Ser	Leu	Ala			
					260						265						270	
Gly	Ser	Cys	Pro	Ser	Thr	Arg	Leu	Leu	Thr	Leu	Glu	Glu	Ala	Gln	Ala			
					275						280						285	
Arg	Thr	Gln	Gly	Arg	Leu	Gly	Thr	Pro	Thr	Glu	Pro	Thr	Thr	Pro	Lys			
					290						295						300	
Ala	Pro	Ala	Ser	Pro	Ala	Glu	Arg	Arg	Lys	Gly	Glu	Arg	Gly	Glu	Lys			
305						310						315						320
Gln	Arg	Lys	Pro	Gly	Gly	Ser	Ser	Trp	Lys	Thr	Phe	Phe	Ala	Leu	Gly			
					325						330						335	
Arg	Gly	Pro	Ser	Val	Pro	Arg	Lys	Lys	Pro	Leu	Pro	Trp	Leu	Gly	Gly			
					340						345						350	
Thr	Arg	Ala	Pro	Pro	Gln	Pro	Ser	Ala	Trp	Leu	Asp	Asp	Gly	Asp	Glu			
					355						360						365	
Leu	Asp	Phe	Ser	Pro	Pro	Arg	Cys	Leu	Glu	Gly	Leu	Arg	Gly	Leu	Asp			
					370						375						380	
Phe	Asp	Pro	Leu	Thr	Phe	Arg	Cys	Ser	Ser	Pro	Thr	Pro	Gly	Asp	Pro			
385						390						395						400
Ala	Pro	Pro	Ala	Ser	Pro	Ala	Pro	Pro	Ala	Pro	Ala	Ser	Ala	Phe	Pro			
					405						410						415	
Pro	Arg	Val	Thr	Pro	Gln	Ala	Ile	Ser	Pro	Arg	Gly	Pro	Thr	Ser	Pro			
					420						425						430	
Ala	Ser	Pro	Ala	Ala	Leu	Asp	Ile	Ser	Glu	Pro	Leu	Ala	Val	Ser	Val			
					435						440						445	
Pro	Pro	Ala	Val	Leu	Glu	Leu	Leu	Gly	Ala	Gly	Gly	Ala	Pro	Ala	Ser			
					450						455						460	
Ala	Thr	Pro	Thr	Pro	Ala	Leu	Ser	Pro	Gly	Arg	Ser	Leu	Arg	Pro	His			
465						470						475						480
Leu	Ile	Pro	Leu	Leu	Leu	Arg	Gly	Ala	Glu	Ala	Pro	Leu	Thr	Asp	Ala			
					485						490						495	
Cys	Gln	Gln	Glu	Met	Cys	Ser	Lys	Leu	Arg	Gly	Ala	Gln	Gly	Pro	Leu			
					500						505						510	
Ala	Arg	Leu	Met	Ala	Leu	Ala	Leu	Ala	Glu	Arg	Ala	Gln	Gln	Val	Ala			
					515						520						525	
Glu	Gln	Gln	Ser	Gln	Gln	Glu	Cys	Gly	Gly	Thr	Pro	Pro	Ala	Ser	Gln			
					530						535						540	
Ser	Pro	Phe	His	Arg	Ser	Leu	Ser	Leu	Glu	Val	Gly	Gly	Glu	Pro	Leu			
545						550						555						560
Gly	Thr	Ser	Gly	Ser	Gly	Pro	Pro	Pro	Asn	Ser	Leu	Ala	His	Pro	Gly			
					565						570						575	
Ala	Trp	Val	Pro	Gly	Pro	Pro	Pro	Tyr	Leu	Pro	Arg	Gln	Gln	Ser	Asp			
					580						585						590	
Gly	Ser	Leu	Leu	Arg	Ser	Gln	Arg	Pro	Met	Gly	Thr	Ser	Arg	Arg	Gly			
					595						600						605	
Leu	Arg	Gly	Pro	Ala	Gln	Val	Ser	Ala	Gln	Leu	Arg	Ala	Gly	Gly	Gly			
					610						615						620	
Gly	Arg	Asp	Ala	Pro	Glu	Ala	Ala	Ala	Gln	Ser	Pro	Cys	Ser	Val	Pro			
625						630						635						640
Ser	Gln	Val	Pro	Thr	Pro	Gly	Phe	Phe	Ser	Pro	Ala	Pro	Arg	Glu	Cys			
					645						650						655	
Leu																		

660 665 670
 Pro Pro Ser Phe Gln Pro Ser Ser Pro Ala Pro Val Trp Arg Ser Ser
 675 680 685
 Leu Gly Pro Pro Ala Pro Leu Asp Arg Gly Glu Asn Leu Tyr Tyr Glu
 690 695 700
 Ile Gly Ala Ser Glu Gly Ser Pro Tyr Ser Gly Pro Thr Arg Ser Trp
 705 710 715 720
 Ser Pro Phe Arg Ser Met Pro Pro Asp Arg Leu Asn Ala Ser Tyr Gly
 725 730 735
 Met Leu Gly Gln Ser Pro Pro Leu His Arg Ser Pro Asp Phe Leu Leu
 740 745 750
 Ser Tyr Pro Pro Ala Pro Ser Cys Phe Pro Pro Asp His Leu Gly Tyr
 755 760 765
 Ser Ala Pro Gln His Pro Ala Arg Arg Pro Thr Pro Pro Glu Pro Leu
 770 775 780
 Tyr Val Asn Leu Ala Leu Gly Pro Arg Gly Pro Ser Pro Ala Ser Ser
 785 790 795 800
 Ser Ser Ser Ser Pro Pro Ala His Pro Arg Ser Arg Ser Asp Pro Gly
 805 810 815
 Pro Pro Val Pro Arg Leu Pro Gln Lys Gln Arg Ala Pro Trp Gly Pro
 820 825 830
 Arg Thr Pro His Arg Val Pro Gly Pro Trp Gly Pro Pro Glu Pro Leu
 835 840 845
 Leu Leu Tyr Arg Ala Ala Pro Pro Ala Tyr Gly Arg Gly Gly Glu Leu
 850 855 860
 His Arg Gly Ser Leu Tyr Arg Asn Gly Gly Gln Arg Gly Glu Gly Ala
 865 870 875 880
 Gly Pro Pro Pro Pro Tyr Pro Thr Pro Ser Trp Ser Leu His Ser Glu
 885 890 895
 Gly Gln Thr Arg Ser Tyr Cys
 900

<210> 5381

<211> 1576

<212> DNA

<213> Homo sapiens

<400> 5381

nccatggcga tgagggcctt ctttggcatc gtccccgtcc tcatggatga gaagggcagc
 60
 gtcgtggagg gcagcaacgt ctccggggcc ctgtgcatct cccaggcctg gccgggcatg
 120
 gccaggacca tctatggcga ccaccagcga tttgtggacg cctacttcaa ggcctaccca
 180
 ggctattact tcatgggaga cggggcttac cgaactgagg gcggctatta ccagatcaca
 240
 gggcgatg atgatgtcat caacatcagt ggccaccggc tggggaccgc agagattgag
 300
 gacgccatcg ccgaccaccc tgcagtacca gaaagtgtg tcatgggcta cccccacgac
 360
 atcaaaggag aagctgcctt tgccttcatt gtggtgaaag atagtgcggg tgactcagat
 420
 gtggtggtgc aggagctcaa gtccatggtg gccaccaaga tcgccaaata tgctgtgcct
 480

gatgagatcc tgggtggtgaa acgtcttcca aaaaccaggt ctgggaaggt catgcggcgg
 540
 ctcctgagga agatcatcac tagtgaggcc caggagctgg gagacactac caccttgagg
 600
 gacccagca tcatcgaga gatcctgagt gtctaccaga agtgcaagga caagcaggct
 660
 gctgctaagt gagctggcac cttgtggggc tcttgggatg ggcgggcacc caagccctgg
 720
 cttgtccttc ccagaaggta cccctgaggt tggcgtcttc ctacgtccca gaagcagccc
 780
 ccaccccaca catgaccac accgccctca cgtgaagctg ggctgagagc ctttctccc
 840
 atccattgga ggtcccagga gtgtcaccca tggagaggct atgcgacatg gctagggctg
 900
 gttctgcat ctgagtttg tttcctggaa tgaaaaggca ttgccatctc cattcctctg
 960
 cctctttgag ccagcacagg aaggtagagg cctgggatag cgcgcctgct cagataaac
 1020
 agagctagtt agctagtagc aaccgtgttt tctccagatc tgtctagata caaaggctcag
 1080
 aaatcttatt tttatacttt tatattgtgg aagaacagca tgcaaacctc acatgtagtg
 1140
 tgtggattta cttgaacatg ttctttttaa catgtagtta tgaaaatctc cttttttgcc
 1200
 tctactggtg aggaaacatg aggatcagag gccacatttt taattattgt tagtgtattt
 1260
 ggaagtctga attggagatg tttgtacctc tgtctaaaca gttcccttga ggacttccaa
 1320
 gcctccggca tcttttcttg gtgagtgttt ctctgtgct tggttgtgta taatggagct
 1380
 aactcctaag cgggtgggtg aatgtggccg ccttagttct gaagctactc cagttatggt
 1440
 ctgtttcttc aagctgtgat ccagaaagat ttttgtgccc ccagatgct tcttgatagg
 1500
 agaggcaaca tactccaaat agttgggttc ttcagggaag ctattagaaa ctcagggtgac
 1560
 ttgttagagc actaac
 1576

<210> 5382

<211> 223

<212> PRT

<213> Homo sapiens

<400> 5382

Xaa Met Ala Met Arg Pro Phe Phe Gly Ile Val Pro Val Leu Met Asp
 1 5 10 15
 Glu Lys Gly Ser Val Val Glu Gly Ser Asn Val Ser Gly Ala Leu Cys
 20 25 30
 Ile Ser Gln Ala Trp Pro Gly Met Ala Arg Thr Ile Tyr Gly Asp His
 35 40 45
 Gln Arg Phe Val Asp Ala Tyr Phe Lys Ala Tyr Pro Gly Tyr Tyr Phe
 50 55 60
 Thr Gly Asp Gly Ala Tyr Arg Thr Glu Gly Gly Tyr Tyr Gln Ile Thr

65					70					75					80
Gly	Arg	Met	Asp	Asp	Val	Ile	Asn	Ile	Ser	Gly	His	Arg	Leu	Gly	Thr
				85					90					95	
Ala	Glu	Ile	Glu	Asp	Ala	Ile	Ala	Asp	His	Pro	Ala	Val	Pro	Glu	Ser
			100					105					110		
Ala	Val	Ile	Gly	Tyr	Pro	His	Asp	Ile	Lys	Gly	Glu	Ala	Ala	Phe	Ala
		115					120					125			
Phe	Ile	Val	Val	Lys	Asp	Ser	Ala	Gly	Asp	Ser	Asp	Val	Val	Val	Gln
		130				135					140				
Glu	Leu	Lys	Ser	Met	Val	Ala	Thr	Lys	Ile	Ala	Lys	Tyr	Ala	Val	Pro
145					150					155					160
Asp	Glu	Ile	Leu	Val	Val	Lys	Arg	Leu	Pro	Lys	Thr	Arg	Ser	Gly	Lys
			165					170						175	
Val	Met	Arg	Arg	Leu	Leu	Arg	Lys	Ile	Ile	Thr	Ser	Glu	Ala	Gln	Glu
		180					185						190		
Leu	Gly	Asp	Thr	Thr	Thr	Leu	Glu	Asp	Pro	Ser	Ile	Ile	Ala	Glu	Ile
		195					200					205			
Leu	Ser	Val	Tyr	Gln	Lys	Cys	Lys	Asp	Lys	Gln	Ala	Ala	Ala	Lys	
		210				215					220				

<210> 5383

<211> 2027

<212> DNA

<213> Homo sapiens

<400> 5383

gttgcttcc tttatctcttc tcaagacggc ttccctctat gtgtctatgt ctatgtgtcc
 60
 ccctgtaagg acagcagtc tgcctggatca gggccacccc tcatccacac aaccttgtct
 120
 taactcagta catctccagt ggccccattt ccaaagaagg ttgcgttctg gggttctggg
 180
 ggctgagact ccagcatatg aatttggggg ggacatgatg ggaccagcg cagtggcctt
 240
 ctctccgag cagcgccggg caggccaggg catgaccac acctgtttgt ttcccttcag
 300
 atcgtctcga ccagggagaa ggagctggg cagcccttca gtcgctgtt cccgaagggt
 360
 gactacatcg ccagggccgg cgctggggc atgttctctg accggcccca gcagtggctc
 420
 cagctcgtcc tcttcccccc ggccctgttc atcccagca cagagaatga ggagcagcg
 480
 ctacgctctg ccagagctgt cccaggaat gtccagccgt atgtggtgta cgaggaggtc
 540
 accaactctt ggatcaatgt tcatgacatc ttctatccct tccccaatc agagggagag
 600
 gacgagctct gctttctccg cgccaatgaa tgcaagaccg gcttctgcca tttgtacaaa
 660
 gtcaccgccc ttttaaaatc ccagggctac gattggagtg agcccttcag ccccggggaa
 720
 ggtgagcaga gctgacgaa tgctatctgg gtcaatgagg agaccaagct ggtgtacttc
 780
 cagggcacca aggacacgcc gctggagcac cacctctacg tggtcagcta tgaggcgccc
 840

ggcgagatcg tacgcctcac cacgcccggc ttctcccata gctgctccat gagccagaac
 900
 ttcgacatgt tcgtcagcca ctacagcagc gtgagcacgc cgccctgcgt gcacgtctac
 960
 aagctgagcg gccccgacga cgaccccctg cacaagcagc cccgcttctg ggctagcatg
 1020
 atggaggcag ccaagatctt ccatttccac acgcgctcgg atgtgcggct ctacggcatg
 1080
 atctacaagc cccacgcctt gcagccaggg aagaagcacc ccaccgtcct ctttgtatat
 1140
 ggaggccccc aggtgcagct ggtgaataac tccttcaaag gcatcaagta cttgcggctc
 1200
 aacacactgg cctccctggg ctacgccgtg gttgtgattg acggcagggg ctctgtcag
 1260
 cgagggttc ggttcgaagg ggccctgaaa aaccaaattg gccagggtga gatcgaggac
 1320
 cagggtggagg gcctgcagtt cgtggccgag aagtatggct tcacgcacct gagccgagtt
 1380
 gccatccatg gctggctcta cgggggcttc ctctcgtca tggggctaata ccacaagccc
 1440
 cagggtgttca aggtggccat cgcgggtgcc cgggtcaccg tctggatggc ctacgacaca
 1500
 ggggtacactg agcgtacat ggacgtccct gagaacaacc agcacggcta tgaggcgggt
 1560
 tccgtggccc tgcacgtgga gaagctgccc aatgagccca accgcttgct tatectccac
 1620
 ggcttcctgg acgaaaacgt gcactttttc cacacaaact tcctcgtctc ccaactgac
 1680
 cgagcaggga aaccttacca gctccaggtg gccctgcctc ctgtctcccc gcagatctac
 1740
 cccaacgaga gacacagtat tcgctgcccc gagtcgggag agcactatga agtcacgttg
 1800
 ctgcactttc tacaggaata cctctgagcc tgcccaccgg gagccgccac atcacagcac
 1860
 aagtggctgc agcctccgag ggaaccagg cgggaggagc tgagtggccc gggggcccca
 1920
 gtgaggcact ttgtcccgcc cagcgctggc cagccccgag gagccgctgc cttcaccgcc
 1980
 ccgacgcctt ttatcctttt ttaaagctc ttgggtttta tgtccgc
 2027

<210> 5384

<211> 508

<212> PRT

<213> Homo sapiens

<400> 5384

Ile Val Ser Thr Gln Glu Lys Glu Leu Val Gln Pro Phe Ser Ser Leu
 1 5 10 15
 Phe Pro Lys Val Glu Tyr Ile Ala Arg Ala Gly Ala Trp Ala Met Phe
 20 25 30
 Leu Asp Arg Pro Gln Gln Trp Leu Gln Leu Val Leu Leu Pro Pro Ala
 35 40 45
 Leu Phe Ile Pro Ser Thr Glu Asn Glu Glu Gln Arg Leu Ala Ser Ala

50	55	60
Arg Ala Val Pro Arg	Asn Val Gln Pro Tyr Val	Val Tyr Glu Glu Val
65	70	75
Thr Asn Val Trp Ile	Asn Val His Asp Ile Phe Tyr Pro Phe Pro Gln	80
	85	90
Ser Glu Gly Glu Asp	Glu Leu Cys Phe Leu Arg Ala Asn Glu Cys Lys	95
	100	105
Thr Gly Phe Cys His	Leu Tyr Lys Val Thr Ala Val Leu Lys Ser Gln	110
	115	120
Gly Tyr Asp Trp Ser	Glu Pro Phe Ser Pro Gly Glu Gly Glu Gln Ser	125
	130	135
Leu Thr Asn Ala Ile	Trp Val Asn Glu Glu Thr Lys Leu Val Tyr Phe	140
	145	150
Gln Gly Thr Lys Asp	Thr Pro Leu Glu His His Leu Tyr Val Val Ser	155
	165	170
Tyr Glu Ala Ala Gly	Glu Ile Val Arg Leu Thr Thr Pro Gly Phe Ser	175
	180	185
His Ser Cys Ser Met	Ser Gln Asn Phe Asp Met Phe Val Ser His Tyr	190
	195	200
Ser Ser Val Ser Thr	Pro Pro Cys Val His Val Tyr Lys Leu Ser Gly	205
	210	215
Pro Asp Asp Asp Pro	Leu His Lys Gln Pro Arg Phe Trp Ala Ser Met	220
	225	230
Met Glu Ala Ala Lys	Ile Phe His Phe His Thr Arg Ser Asp Val Arg	235
	245	250
Leu Tyr Gly Met Ile	Tyr Lys Pro His Ala Leu Gln Pro Gly Lys Lys	255
	260	265
His Pro Thr Val Leu	Phe Val Tyr Gly Gly Pro Gln Val Gln Leu Val	270
	275	280
Asn Asn Ser Phe Lys	Gly Ile Lys Tyr Leu Arg Leu Asn Thr Leu Ala	285
	290	295
Ser Leu Gly Tyr Ala	Val Val Val Ile Asp Gly Arg Gly Ser Cys Gln	300
	305	310
Arg Gly Leu Arg Phe	Glu Gly Ala Leu Lys Asn Gln Met Gly Gln Val	315
	325	330
Glu Ile Glu Asp Gln	Val Glu Gly Leu Gln Phe Val Ala Glu Lys Tyr	335
	340	345
Gly Phe Ile Asp Leu	Ser Arg Val Ala Ile His Gly Trp Ser Tyr Gly	350
	355	360
Gly Phe Leu Ser Leu	Met Gly Leu Ile His Lys Pro Gln Val Phe Lys	365
	370	375
Val Ala Ile Ala Gly	Ala Pro Val Thr Val Trp Met Ala Tyr Asp Thr	380
	385	390
Gly Tyr Thr Glu Arg	Tyr Met Asp Val Pro Glu Asn Asn Gln His Gly	395
	405	410
Tyr Glu Ala Gly Ser	Val Ala Leu His Val Glu Lys Leu Pro Asn Glu	415
	420	425
Pro Asn Arg Leu Leu	Ile Leu His Gly Phe Leu Asp Glu Asn Val His	430
	435	440
Phe Phe His Thr Asn	Phe Leu Val Ser Gln Leu Ile Arg Ala Gly Lys	445
	450	455
Pro Tyr Gln Leu Gln	Val Ala Leu Pro Pro Val Ser Pro Gln Ile Tyr	460
	465	470
Pro Asn Glu Arg His	Ser Ile Arg Cys Pro Glu Ser Gly Glu His Tyr	475
	480	

Glu Val Thr Leu Leu His Phe Leu Gln Glu Tyr Leu
 485 490 495
 500 505

<210> 5385
 <211> 314
 <212> DNA
 <213> Homo sapiens

<400> 5385
 agatctcacc agatggggac ccagctggc actgggtggc atttcttctt cccttgctct
 60
 acttggagca tatgttggtc gtggaaccga aaggaacgta gcaaaaagag tgttcccagc
 120
 cctccccggg ccagccgct gggcagaggg ctgcatgctg gctggctggc caggctgggg
 180
 cagcctggcc tctcggccc ctacgtgca ccaccttcc acttctgga gatgcaccca
 240
 catctccagg aaaattgttt cagaaaatgc ctacaacaca gcagagagtg gaacaaacag
 300
 ggtcccaacg catg
 314

<210> 5386
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5386
 Met Gly Thr Pro Ala Gly Thr Gly Trp His Phe Phe Phe Pro Cys Ser
 1 5 10 15
 Thr Trp Ser Ile Cys Cys Ser Trp Asn Arg Lys Glu Arg Ser Lys Lys
 20 25 30
 Ser Val Pro Ser Pro Pro Arg Ala Gln Pro Leu Gly Arg Gly Leu His
 35 40 45
 Ala Gly Trp Leu Ala Arg Leu Gly Gln Pro Gly Leu Leu Gly Pro Tyr
 50 55 60
 Ala Ala Pro Thr Phe His Phe Leu Glu Met His Pro His Leu Gln Glu
 65 70 75 80
 Asn Cys Phe Arg Lys Cys Leu Gln His Ser Arg Glu Trp Asn Lys Gln
 85 90 95
 Gly Pro Asn Ala
 100

<210> 5387
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 5387
 ntggactccc ccaggttcag caggatggcg atggccgcta ggatgaagca gatggcgta
 60
 accgccacgc accagtccat gggcaactgg tccatgttca cctgggtgctt ctgcttctcc
 120

atgacctga tcatcctcat cgtggagctg tgcgggctcc aggcccgctt cccctgtct
 180
 tggcgcaact tccccatcac ctctgcctgc tatcgggccc tcttctgcct ctggcctcc
 240
 atcatctacc ccaccaccta tgtccagttc ctgtcccacg gccgttcgcg ggaccacgcc
 300
 atcgccgcca ccttcttctc ctgcatcgcg tgtgtggctt acgccaccga aatggcctgg
 360
 acccgggccc gggcc
 375

<210> 5388

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5388

Xaa	Asp	Ser	Pro	Arg	Phe	Ser	Arg	Met	Ala	Met	Ala	Ala	Arg	Met	Lys
1				5				10					15		
Gln	Met	Ala	Tyr	Thr	Ala	Thr	His	Gln	Ser	Met	Gly	Asn	Trp	Ser	Met
		20						25				30			
Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Met	Thr	Leu	Ile	Ile	Leu	Ile	Val
	35						40				45				
Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro	Leu	Ser	Trp	Arg	Asn	Phe
	50					55				60					
Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu	Phe	Cys	Leu	Ser	Ala	Ser
65				70					75					80	
Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe	Leu	Ser	His	Gly	Arg	Ser
			85					90					95		
Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe	Ser	Cys	Ile	Ala	Cys	Val
		100						105					110		
Ala	Tyr	Ala	Thr	Glu	Met	Ala	Trp	Thr	Arg	Ala	Arg	Ala			
		115					120					125			

<210> 5389

<211> 1711

<212> DNA

<213> Homo sapiens

<400> 5389

nncgagcggc agggggccaa acacaaaagg gagccggaga agccctagcc gctgcccagc
 60
 agcttgcggg cgtgttctcg cggttccggg cctcaaggcg acggaaacga aaggcgagcg
 120
 aagcgcgagg gatccggcga gaagaagcgt cagggagcct cggcggtgtc cccgggggtcc
 180
 gccgaagcca cccggccgcc ggctggggcc cggggtggtg aggaagtgtc ccgaggcctc
 240
 gccgaggcct agcgccggct ttgtgtccga ggcggcgggc gcggcggggg gaggcggagc
 300
 cgggggcggc ctgcgggaag gcctctctc cgccgaccgc gcgttttcgg cctaggccgc
 360
 ggggcccgtc gtggcctccg gggagcaggc gccaggggtt tgtgtgcggt gggggcctgg
 420

gcctgggacct ggggaagctg acgccggtcg tccggaagcc aggaggaggc gtgaggccgc
 480
 tcgtggactc cgggcctagg ccctctcccc tcaaccttct cccggggcct gggtcacccc
 540
 aatccacgga gagagagacc cgccgggagg tgcggccgcg ctatggacce ctgacccccg
 600
 tggggctcgt cggactctta acgtgtggac tgaccgctac tgactgcacc gccaatcccc
 660
 ccgtctctgc cggccccctta gcatgagcga gggggaccca gccgggtgac attgtgcccg
 720
 ttggcggatt ctcgatttcc cctcttcccc gtctctgccc tctctctccc ccatgaagtg
 780
 attctgagta tcgggggggtc tctggattat tgttctgacg aacctctgct tgtgggtggg
 840
 ggggtatttaa tctgaggcct tagggctcctt cgggtgtcttt gagtgttttg tgtgtacata
 900
 ttttgcctct aaagtttata aatatacgta tattgagagt gtccacgtct cctcgtgaa
 960
 ccttaggaat cccttggcac catgtctctgt gtgcattata aattttcttc taaactcaac
 1020
 tatgataccg tcacctttga tgggctccac atctccctct gcgacttaaa gaagcagatt
 1080
 atggggagag agaagctgaa agctgccgac tgcgacctgc agatcaccaa tgcgcagacg
 1140
 aaagaagaat atactgatga taatgtctctg attcctaaga attcttctgt aattgttaga
 1200
 agaattccta ttggagggtgt taaatctaca agcaagacat atgtttataag tcgaactgaa
 1260
 ccagcgatgg caactacaaa agcagtatgt aaaaacacaa tctcacactt tttctacaca
 1320
 ttgcttttac ctttataatg tagcagttaa gtaaatcatt ttagaactta atatccaact
 1380
 gatcatagta catattgtaa ataaaatgta ttttgatgac agctcagttg aatatggata
 1440
 atatgtggca tcacttgac acttattttg tagaaatggg taatttgtgc ccgtaacact
 1500
 gtttcatatt aaatatgata gcattatccc tgtatgacac tgtgtgtgac agttaatgta
 1560
 tgatcctttt tagatcgttt aggttttaca ctaaggaaca tgatgacatg ttctacattt
 1620
 gtctgtctat agttagtatt ttgtatgtat gtacaggctg ttgtgtgctt tttgtttctt
 1680
 gcaataaaaa atgtttggag tgtatatttt g
 1711

<210> 5390

<211> 118

<212> PRT

<213> Homo sapiens

<400> 5390

Met	Ser	Cys	Val	His	Tyr	Lys	Phe	Ser	Ser	Lys	Leu	Asn	Tyr	Asp	Thr
1				5					10					15	
Val	Thr	Phe	Asp	Gly	Leu	His	Ile	Ser	Leu	Cys	Asp	Leu	Lys	Lys	Gln

```
<210> 5392
<211> 55
<212> PRT
<213> Homo sapiens
```

```
<210> 5393
<211> 4837
<212> DNA
<213> Homo sapiens
```

4572

ggggaggcag agccttatcc tcggctgccc ttcttggtc cctgcattcc agggacttgc
1200
tcgtcttgtt tacccttagc catcctttct ttcaagggtg aaccaggcct tccacctga
1260
ccttgcatct ccagactgtt ccagagaagg tgccggggcca gctgctatgt ggtggccgct
1320
gtggctgaca ctgagtgaag gtgtttgaaa tgcaggagag gatatcccag caaattggga
1380
tcacatgctt ttgtctccac agcaaccagc cactgcaggc agcatgtctt tcctcccctg
1440
ctctctgctt gctgttgttt tgacgctatt ctgcttgcat gtcttctggt tgggatgtgg
1500
agttgttgcg ggactctcag gcgaagctga agtcattgaa gtgtgtgaag ctctgtgctt
1560
gcatgagggc aagcaaggaa tggctgtgcc tgaggctgct ctgggaaact ccttgcccct
1620
tgacctcttt tgagagcatt cacgtggctc tcttgctcat ccccttataa atgtgctttg
1680
cctgcctcag cctcatggtc agagcagtggt agactggagc cctgtttgca cgttctagtt
1740
gttcggagaa agcctagggt ctgggctcag gtccagatgc agcggggatt ctgttctctg
1800
actgtggcga ccttgctttg gttcttgttg aagtgaacca agcccggcca ccacgcattg
1860
catgctgtgc ttggctcccc ataagacgtc ctctttgggt gcacgggtgc aaagtgtggg
1920
caggagtggg gagctgggtc cctcaggagg agaccacagc atgtccatca gctcagcaga
1980
gctcgacagc cacaagtcct gagaagcttt gaccttgaag ggcttctggg agaggaggaa
2040
tttctgcatg gggcgtgaag gcacactgtc ccaccacaac tgaaccagaa gagagtgaag
2100
actcccctct tcccatcctc tgtgccagggt gccagactgt gctccttga acttatggcc
2160
caatcttacc tgttctccag ggactgggtc ctgcctcagg acccccaagc ctatgccctg
2220
agccatggct gctgactgac tccagccaag gtgcaaagac gagattatga gacaggctct
2280
caggcctgtg ttccaagtac tcacaggggc tctgggtgcc catcgccggg agtatgggtc
2340
agctgccacc ggcactgtcc atttgcctgt ctgtcaagct cagagcatgg ataagccaca
2400
cagcagggca gtgcacctg gcaccatgca cggccagcaa gaatcaaggc ccgcagatgc
2460
taagagggcc tattgtcagg ggaaggctcc cgctcctgca cactctctat ggatacttgg
2520
gttgtggggg ctctcttga gagtaagttt gtggtttgtt tctggtttac agtgggtggc
2580
gacacccctt gtaagaaagc attcctggga agtcttctgt gggtcctaac atgttgctcc
2640
gatcatcaca ggagagcaaa aggccttaga taccoccttt ggaatgtgag agtcttgttg
2700
tctgatattt gccactgagc tgggtgaagc cctctaaaga gatctcgacc ctggggagca
2760

gaattcttgt catctatgag gggtcctgag aaagacttgt catttttttt cctggagttc
2820
ttcccatga ggtcctagga ttgacacacc actgtccac aagagctttc ctgcctaag
2880
aaaggaggtc ttgtggtgtg tgtctctct cttctctata gttcccgagt tggccccc
2940
tgcagcccc accctgtggg tagtcttcca gaagtgatgc agtgggtgga gatgccctac
3000
acctgttat ttgggagact ttgagagtca ttcacttcca tgggtgactag tgtttgttt
3060
gcctgatttt atattctgtg ttgcatttct cccactccc tgcctgctt taataaacag
3120
caaaccaata tctaggaaga atgactgagg gatagtattg ggtattggcc ccatggcagg
3180
aacagccact tgcactcgtt cccgggtcca cactgcggtg cttgggtgtg ttgtggagcc
3240
tgtccctgcg cgccttgctc cgggtgagcc acgctgtctg gtgggtgatt ctctgcctg
3300
agccaccacc ctggactggc ccagtctcca gagctggcac accctgcctg tttctcttt
3360
ttagacacaa cagccgcagt ttggccagcc actaagtccc accagctgag gtccgaggaa
3420
agcggggtga ctcatctccc ttgtccaggg cccgaggaga gtgagggtgc cagcctgcaa
3480
agctattcca gctccttggg gttgggttgc aataaattgg tattaagca gttctgggt
3540
tgcgtgtgac atttctgtg gagacagttc tgtctgtgca tgggtcattat tgttgcatc
3600
tagccttgag gtcccaggcc aacgtacaca gcaaacacca gcatggggaa ttcttagggg
3660
ttgttttcca tctggtctga atgcactggg caagatctca atacagcttt agaaatcctg
3720
taagattttg accagtgggg agaaaaagaa tgtagctata gatcttacat cctttcaaac
3780
aggttctgga attctgtagt tactggaaag cttagggtga gtgcagagtt gggaaatgatt
3840
ccactgaagg gccacctttg cccaccaggc tccaaggccc tccttgggtc ccagggtgat
3900
acctgctgtt aactttgctg agccctcgca atgggcttcc tccaggacat aacgccgtgt
3960
ctgacacaga agtctcccag gtggtgggcc acctgcttct tcctcagtc gatctttgac
4020
tctccttctc tgtgcccacc ccatctccag cctcctctga ccctgctcac ccctggggac
4080
aggacctagg ggtgtgagaa gtacttggct gaataaagac tgtttcaaag gcaatcctta
4140
gaattgccta gcatactccc agggccagaa ataaccgcc agaaaggaga ggcgtatttg
4200
cccctgaaga gtgcaggagg gagaacagtt gagaagtgtt ttgtgtggaa atgtgtccaa
4260
gaggcgtcag ctgctgcaca gagaactcac tgcccagaac actgcgcttg gggaacagac
4320
ctcaccccca cctcaaactc gctctccact gggcctgttg gcagccagct cagctgggga
4380

agggacagca tgactcgctt tgcgatgaa aagcacgaag ttgtcagcac agaacctggc
 4440
 cagtccttga gaaactccct ccttggtggt cagaggtcaa gcagcccatg tggcccacgg
 4500
 tcctgaagaa ctgggctatg tccctgagggc tcctctctac cgtctgactg tggggtctgg
 4560
 ggaacaggca tttaaaccag gctgctgccc tggggagtgc ccactggacg ccaggggtgcc
 4620
 ccatagggac agggtcacaa agccctgggg cttcccctgc cagtcctggt gaggacagtg
 4680
 tggtcactat ctcagagaga cgaaaaatga atattctgtc atttcagact aaactactca
 4740
 ccagctcac actaatatgg atttgtaaat ttacctttt tttttcttcc caactttagg
 4800
 ttcaagggtt gttacatggg taaattggat catagggg
 4837

<210> 5394

<211> 354

<212> PRT

<213> Homo sapiens

<400> 5394

Leu	Tyr	Asp	Gln	Ala	Leu	Leu	Gly	Ile	Leu	Gln	His	Val	Gly	Asn	Val
1				5					10					15	
Gln	Asp	Phe	Leu	Arg	Val	Leu	Phe	Gly	Phe	Leu	Tyr	Arg	Lys	Thr	Asp
			20					25					30		
Phe	Tyr	Arg	Leu	Leu	Arg	His	Pro	Ser	Asp	Arg	Met	Gly	Phe	Pro	Pro
			35				40					45			
Gly	Ala	Ala	Gln	Ala	Leu	Val	Leu	Gln	Val	Phe	Lys	Thr	Phe	Asp	His
	50					55				60					
Met	Ala	Arg	Gln	Asp	Asp	Glu	Lys	Arg	Arg	Gln	Glu	Leu	Glu	Glu	Lys
65				70					75					80	
Ile	Arg	Arg	Lys	Glu	Glu	Glu	Glu	Ala	Lys	Thr	Val	Ser	Ala	Ala	Ala
			85					90					95		
Ala	Glu	Lys	Glu	Pro	Val	Pro	Val	Pro	Val	Gln	Glu	Ile	Glu	Ile	Asp
			100					105					110		
Ser	Thr	Thr	Glu	Leu	Asp	Gly	His	Gln	Glu	Val	Glu	Lys	Val	Gln	Pro
			115				120					125			
Pro	Gly	Pro	Val	Lys	Glu	Met	Ala	His	Gly	Ser	Gln	Glu	Ala	Glu	Ala
	130					135					140				
Pro	Gly	Ala	Val	Ala	Gly	Ala	Ala	Glu	Val	Pro	Arg	Glu	Pro	Pro	Ile
145				150						155				160	
Leu	Pro	Arg	Ile	Gln	Glu	Gln	Phe	Gln	Lys	Asn	Pro	Asp	Ser	Tyr	Asn
			165					170						175	
Gly	Ala	Val	Arg	Glu	Asn	Tyr	Thr	Trp	Ser	Gln	Asp	Tyr	Thr	Asp	Leu
			180					185					190		
Glu	Val	Arg	Val	Pro	Val	Pro	Lys	His	Val	Val	Lys	Gly	Lys	Gln	Val
			195				200					205			
Ser	Val	Ala	Leu	Ser	Ser	Ser	Ser	Ile	Arg	Val	Ala	Met	Leu	Glu	Glu
	210					215					220				
Asn	Gly	Glu	Arg	Val	Leu	Met	Glu	Gly	Lys	Leu	Thr	His	Lys	Ile	Asn
225				230						235				240	
Thr	Glu	Ser	Ser	Leu	Trp	Ser	Leu	Glu	Pro	Gly	Lys	Cys	Val	Leu	Val

```
<210> 5395
<211> 3711
<212> DNA
<213> Homo sapiens
```

```

<400> 5395
cccggggccc caggagcagt aggtgttagc agcttggtcg cgacagggtgc gctaggtaga
60
gcgccccggac ctgtgacagg gctggtagca gcgcagagga aaggcggctt ttagccaggt
120
atttcagtgt ctgtagacag gatggaatca tctccattta atagacggca atggacctca
180
ctatcattga gggtaacagc caaagaactt tctcttgtca acaagaacaa gtcatcggct
240
attgtggaag tattctccaa gtaccagaaa gcagctgaag aaacaaacat ggagaagaag
300
agaagtaaca ccgaaaatct ctcccagcac tttagaaagg ggaccctgac tgtgttaaag
360
aagaagtggg agaaccagg gctgggagca gagtctcaca cagactctct acggaacagc
420
agcactgaga ttaggcacag agcagaccat cctcctgctg aagtgacaag ccacgctgct
480
tctggagcca aagctgacca agaagaacaa atccaccca gatctagact caggtcacct
540
cctgaagccc tcgttcaggg tcgatatccc cacatcaagg acggtgagga tcttaaagac
600
cactcaacag aaagtaaaaa aatggaaaat tgtctaggag aatccaggca tgaagtagaa
660
aaatcagaaa tcagtgaaaa cacagatgct tcgggcaaaa tagagaaata taatgttcgg
720
ctgaacaggc ttaagatgat gtttgagaaa ggtgaaccaa ctcaaactaa gattctccgg
780
gcccaaagcc gaagtgcaag tggaagggaag atctctgaaa acagctattc tctagatgac
840
ctggaaatag gcccaggcca gttgtcatct tctacatttg actcggagaa aaatgagagt
900
agacgaaatc tggaacttcc acgcctctca gaaacctcta taaaggatcg aatggccaag
960

```

taccaggcag ctgtgtccaa acaaagcagc tcaaccaact atacaaatga gctgaaagcc
1020
agtgggtggcg aaatcaaaat tcataaaatg gagcaaaagg agaattgtgcc cccaggctct
1080
gaggtctgca tcacccatca ggaaggggaa aagatttctg caaatgagaa tagcctggca
1140
gtccgttcca cccctgccga agatgactcc ccagggtgact cccagggttaa gagtgaggtt
1200
caacagcctg tccatcccaa gccactaagt ccagattcca gagcctccag tctttctgaa
1260
agttctcctc ccaaagcaat gaagaagttt caggcacctg caagagagac ctgctgggaa
1320
tgtcagaaga cagtctatcc aatggagcgt ctcttggcca accagcaggt gtttcacatc
1380
agctgcttcc gttgctccta ttgcaacaac aaactcagtc taggaacata tgcattctta
1440
catggaagaa tctattgtaa gcctcacttc aatcaactct ttaaactctaa gggcaactat
1500
gatgaaggct ttgggcacag accacacaag gatctatggg caagcaaaaa tgaaaacgaa
1560
gagatttttg agagaccagc ccagcttgca aatgcaaggg agaccctca cagcccaggg
1620
gtagaagatg cccctattgc taagggtgggt gtcctggctg caagtatgga agccaaggcc
1680
tcctctcagc aggagaagga agacaagcca gctgaaacca agaagctgag gatcgcttg
1740
ccacccccca ctgaacttgg aagttcagga agtgccttgg aggaagggat caaaatgtca
1800
aagcccaa at ggctcctga agacgaaatc agcaagcccg aagttcctga ggatgtcgat
1860
ctagatctga agaagctaag acgatcttct tcaactgaagg aaagaagccg cccattcact
1920
gtagcagctt catttcaaag cacctctgtc aagagcccaa aaactgtgtc cccacctatc
1980
aggaaaggct ggagcatgtc agagcagagt gaagagtctg tgggtggaag agttgcagaa
2040
aggaaacaag tggaaaatgc caaggcttct aagaagaatg ggaatgtggg aaaaacaacc
2100
tggcaaaaca aagaatctaa aggagagaca gggaagagaa gtaaggaagg tcatagtttg
2160
gagatggaga atgagaatct ttagaaaaat ggtgcagact ccgatgaaga tgataacagc
2220
ttcctcaaac aacaatctcc acaagaaccc aagtctctga attggtcgag tttttagac
2280
aacaccttg ctgaagaatt cactactcag aatcagaaat cccaggatgt ggaactctgg
2340
gagggagaag tggtaaaaga gctctctgtg gaagaacaga taaagagaaa tcggtattat
2400
gatgaggatg aggatgaaga gtgacaaatt gcaatgatgc tgggccttaa attcatgtta
2460
gtgttagcga gccactgccc tttgtcaaaa tgtgatgcac ataagcaggt atcccagcat
2520
gaaatgta at ttacttgga gtaactttgg aaaagaattc cttcttaaaa tcaaaaacaa
2580

aacaaaaaaa cacaaaaaac acattctaaa tactagagat aactttactt aaattcttca
 2640
 ttttagcagt gatgatatgc ataagtgctg taaggcttgt aactggggaa atattccacc
 2700
 tgataatagc ccagattcta ctgtattccc aaaaggcaat attaaggtag atagatgatt
 2760
 agtagtatat tgttacacac tattttggaa ttagagaaca tacagaagga atttaggggc
 2820
 ttaaacatta cgactgaatg cacttttagta taaagggcac agtttgtata tttttaaatg
 2880
 aataccaatt taatttttta gtatttacct gttaagagat tatttagtct ttaaattttt
 2940
 taggttaatt ttcttgctgt gatatatatg aggaatttac tactttatgt cctgctctct
 3000
 aaactacatc ctgaactcga cgtcctgagg tataatacaa cagagcactt tttgaggcaa
 3060
 ttgaaaaacc aacctacact ctccggtgct tagagagatc tgctgtctcc caaataagct
 3120
 tttgtatctg ccagtgaatt tactgtactc caaatgattg ctttcttttc tggatgatc
 3180
 tgtgcttctc ataattactg aaagctgcaa tattttagta ataccttcgg gatcactgtc
 3240
 ccccatcttc cgtgtagag caaagtgaag agtttaaagg aggaagaaga aagaactgtc
 3300
 ttacaccact tgagctcaga cctctaaacc ctgtatttcc cttatgatgt ccccttttg
 3360
 agacactaat ttttaaatac ttactagctc tgaaatatat tgatttttat cacagtattc
 3420
 tcagggtgaa attaaaccaa ctataggcct ttttcttggg atgattttct agtcttaagg
 3480
 tttggggaca ttataaactt gagtacattt gttgtacaca gttgatattc caaatgtat
 3540
 ggatgggagg gagaggtgtc ttaagctgta ggcttttctt tgtactgcat ttatagagat
 3600
 ttagctttaa tatttttttag agatgtaaaa cattctgctt tcttagtctt acctagtctg
 3660
 aaacattttt attcaataaa gattttaatt aaaatttgaa aaaaaaaaaa a
 3711

<210> 5396

<211> 760

<212> PRT

<213> Homo sapiens

<400> 5396

Met	Glu	Ser	Ser	Pro	Phe	Asn	Arg	Arg	Gln	Trp	Thr	Ser	Leu	Ser	Leu
1				5				10					15		
Arg	Val	Thr	Ala	Lys	Glu	Leu	Ser	Leu	Val	Asn	Lys	Asn	Lys	Ser	Ser
			20					25					30		
Ala	Ile	Val	Glu	Ile	Phe	Ser	Lys	Tyr	Gln	Lys	Ala	Ala	Glu	Glu	Thr
			35				40					45			
Asn	Met	Glu	Lys	Lys	Arg	Ser	Asn	Thr	Glu	Asn	Leu	Ser	Gln	His	Phe
	50					55				60					
Arg	Lys	Gly	Thr	Leu	Thr	Val	Leu	Lys	Lys	Lys	Trp	Glu	Asn	Pro	Gly

65					70					75					80
Leu	Gly	Ala	Glu	Ser	His	Thr	Asp	Ser	Leu	Arg	Asn	Ser	Ser	Thr	Glu
				85					90					95	
Ile	Arg	His	Arg	Ala	Asp	His	Pro	Pro	Ala	Glu	Val	Thr	Ser	His	Ala
			100					105					110		
Ala	Ser	Gly	Ala	Lys	Ala	Asp	Gln	Glu	Glu	Gln	Ile	His	Pro	Arg	Ser
		115					120					125			
Arg	Leu	Arg	Ser	Pro	Pro	Glu	Ala	Leu	Val	Gln	Gly	Arg	Tyr	Pro	His
	130					135					140				
Ile	Lys	Asp	Gly	Glu	Asp	Leu	Lys	Asp	His	Ser	Thr	Glu	Ser	Lys	Lys
145					150					155				160	
Met	Glu	Asn	Cys	Leu	Gly	Glu	Ser	Arg	His	Glu	Val	Glu	Lys	Ser	Glu
			165						170					175	
Ile	Ser	Glu	Asn	Thr	Asp	Ala	Ser	Gly	Lys	Ile	Glu	Lys	Tyr	Asn	Val
		180						185					190		
Pro	Leu	Asn	Arg	Leu	Lys	Met	Met	Phe	Glu	Lys	Gly	Glu	Pro	Thr	Gln
	195						200					205			
Thr	Lys	Ile	Leu	Arg	Ala	Gln	Ser	Arg	Ser	Ala	Ser	Gly	Arg	Lys	Ile
	210					215					220				
Ser	Glu	Asn	Ser	Tyr	Ser	Leu	Asp	Asp	Leu	Glu	Ile	Gly	Pro	Gly	Gln
225					230					235				240	
Leu	Ser	Ser	Ser	Thr	Phe	Asp	Ser	Glu	Lys	Asn	Glu	Ser	Arg	Arg	Asn
			245					250					255		
Leu	Glu	Leu	Pro	Arg	Leu	Ser	Glu	Thr	Ser	Ile	Lys	Asp	Arg	Met	Ala
		260					265						270		
Lys	Tyr	Gln	Ala	Ala	Val	Ser	Lys	Gln	Ser	Ser	Ser	Thr	Asn	Tyr	Thr
	275						280					285			
Asn	Glu	Leu	Lys	Ala	Ser	Gly	Gly	Glu	Ile	Lys	Ile	His	Lys	Met	Glu
	290					295					300				
Gln	Lys	Glu	Asn	Val	Pro	Pro	Gly	Pro	Glu	Val	Cys	Ile	Thr	His	Gln
305					310					315				320	
Glu	Gly	Glu	Lys	Ile	Ser	Ala	Asn	Glu	Asn	Ser	Leu	Ala	Val	Arg	Ser
			325					330					335		
Thr	Pro	Ala	Glu	Asp	Asp	Ser	Pro	Gly	Asp	Ser	Gln	Val	Lys	Ser	Glu
		340						345				350			
Val	Gln	Gln	Pro	Val	His	Pro	Lys	Pro	Leu	Ser	Pro	Asp	Ser	Arg	Ala
	355						360					365			
Ser	Ser	Leu	Ser	Glu	Ser	Ser	Pro	Pro	Lys	Ala	Met	Lys	Lys	Phe	Gln
	370					375					380				
Ala	Pro	Ala	Arg	Glu	Thr	Cys	Val	Glu	Cys	Gln	Lys	Thr	Val	Tyr	Pro
385					390					395				400	
Met	Glu	Arg	Leu	Leu	Ala	Asn	Gln	Gln	Val	Phe	His	Ile	Ser	Cys	Phe
			405					410					415		
Arg	Cys	Ser	Tyr	Cys	Asn	Asn	Lys	Leu	Ser	Leu	Gly	Thr	Tyr	Ala	Ser
		420					425					430			
Leu	His	Gly	Arg	Ile	Tyr	Cys	Lys	Pro	His	Phe	Asn	Gln	Leu	Phe	Lys
	435						440					445			
Ser	Lys	Gly	Asn	Tyr	Asp	Glu	Gly	Phe	Gly	His	Arg	Pro	His	Lys	Asp
	450					455				460					
Leu	Trp	Ala	Ser	Lys	Asn	Glu	Asn	Glu	Glu	Ile	Leu	Glu	Arg	Pro	Ala
465					470					475				480	
Gln	Leu	Ala	Asn	Ala	Arg	Glu	Thr	Pro	His	Ser	Pro	Gly	Val	Glu	Asp
			485					490					495		
Ala	Pro	Ile	Ala	Lys	Val	Gly	Val	Leu	Ala	Ala	Ser	Met	Glu	Ala	Lys

```
<210> 5397
<211> 561
<212> DNA
<213> Homo sapiens
```

```
<400> 5397
tttttttttt gcgaatctgt tgatttattt acggctcggg gagacgacgc tggacgctgg
60
ttagggtaag ggtaggggca agcattagca gcaggggcat ggccctggga agcacctgga
120
ccccagaaca taagacagga gggagagatg ccatccattc agcggggcact tatgcccacg
180
accagctgag ccagaccagc attcccattt caccaccctt tactcctcaa gatgcaaattg
240
aagctcaggg ctgggcggaa gctggcaggg ctgtccacag ggaggacccc cgtgtgtctc
300
tcgggctgcc caggtggctc tgtccaccct tctgtctggg aggctcctta aggctgggga
360
gggccagag ggaaggagat cctgaggggc tggcagattc aggccctccc tgcgagctga
420
```


ggtttgaaga ggagagcaga ccaccagag tagtgggaga aagcaccggc agaaaagctg
 480
 gcatatccac cgagggcctc tctgcttctt ttgacctttt tcagagtttc agagttatga
 540
 accaaatcgc cttcatgaga g
 561

<210> 5398
 <211> 154
 <212> PRT
 <213> Homo sapiens

<400> 5398
 Met Ala Leu Gly Ser Thr Trp Thr Pro Glu His Lys Thr Gly Gly Arg
 1 5 10 15
 Asp Ala Ile His Ser Ala Gly Thr Tyr Ala His Asp Gln Leu Ser Gln
 20 25 30
 Thr Ser Ile Pro Ile Ser Pro Pro Leu Thr Pro Gln Asp Ala Asn Glu
 35 40 45
 Ala Gln Gly Trp Ala Glu Ala Gly Arg Ala Val His Arg Glu Asp Pro
 50 55 60
 Arg Val Ser Leu Gly Leu Pro Arg Trp Leu Cys Pro Pro Phe Cys Leu
 65 70 75 80
 Gly Gly Ser Leu Arg Leu Gly Arg Ala Gln Arg Glu Gly Asp Pro Glu
 85 90 95
 Gly Leu Ala Asp Ser Gly Pro Pro Cys Glu Leu Arg Phe Glu Glu Glu
 100 105 110
 Ser Arg Pro Pro Arg Val Val Gly Glu Ser Thr Gly Arg Lys Ala Gly
 115 120 125
 Ile Ser Thr Glu Gly Leu Ser Ala Ser Phe Asp Leu Phe Gln Ser Phe
 130 135 140
 Arg Val Met Asn Gln Ile Ala Phe Met Arg
 145 150

<210> 5399
 <211> 835
 <212> DNA
 <213> Homo sapiens

<400> 5399
 ncggccgcgc aacaaaggag tcaccggcg atgagccccg gcacccccgg accgaccatg
 60
 ggcagatccc agggcagccc aatggatcca atggtgatga agagacctca gttgtatggc
 120
 atgggcagta accctcatc tcagcctcag cagagcagtc cgtacccagg aggttcctat
 180
 ggccctccag gccacacg cgatccaatt ggcacccagg gtcggactcc cggggccatg
 240
 gccggaatgc agtaccctca gcagcagatg ccacctcagt atggacagca aggtgtgagt
 300
 gggtactgcc agcagggcca acagccatat tacagccagc agccgcagcc cccgcacctc
 360
 ccacccagg cgagtatct gccgtcccag tcccagcaga ggtaccagcc gcagcaggac
 420

atgtctcagg aaggctatgg aactagatct caacctcttc tggcccccg aaaacctaac
 480
 catgaagact tgaacttaat acagcaagaa agaccatcaa gtttaccagt aagacattat
 540
 tgtgctgatt tggaaatgta atgagttaaa gactttttaga aagagctggt gtttttggtt
 600
 gttctacttt atattatgac atgattgaga agtttctaga cttcagggtt attttggtg
 660
 caatttttca aggtttacct tttaggagct ctgtagtcct ggataagtct atttcatgtg
 720
 tatatatctc tgttgacagag tgtagacatc agttggaagg ttttatgcgg ctggtcgatt
 780
 ttgtgtgcag gtggttattg ctgccaaaaa gcaacagcct aaagaaagct caact
 835

<210> 5400
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 5400
 Xaa Ala Ala Gln Gln Arg Ser His Pro Ala Met Ser Pro Gly Thr Pro
 1 5 10 15
 Gly Pro Thr Met Gly Arg Ser Gln Gly Ser Pro Met Asp Pro Met Val
 20 25 30
 Met Lys Arg Pro Gln Leu Tyr Gly Met Gly Ser Asn Pro His Ser Gln
 35 40 45
 Pro Gln Gln Ser Ser Pro Tyr Pro Gly Gly Ser Tyr Gly Pro Pro Gly
 50 55 60
 Pro Gln Arg Tyr Pro Ile Gly Ile Gln Gly Arg Thr Pro Gly Ala Met
 65 70 75 80
 Ala Gly Met Gln Tyr Pro Gln Gln Gln Met Pro Pro Gln Tyr Gly Gln
 85 90 95
 Gln Gly Val Ser Gly Tyr Cys Gln Gln Gly Gln Gln Pro Tyr Tyr Ser
 100 105 110
 Gln Gln Pro Gln Pro Pro His Leu Pro Pro Gln Ala Gln Tyr Leu Pro
 115 120 125
 Ser Gln Ser Gln Gln Arg Tyr Gln Pro Gln Gln Asp Met Ser Gln Glu
 130 135 140
 Gly Tyr Gly Thr Arg Ser Gln Pro Pro Leu Ala Pro Gly Lys Pro Asn
 145 150 155 160
 His Glu Asp Leu Asn Leu Ile Gln Gln Glu Arg Pro Ser Ser Leu Pro
 165 170 175
 Val Arg His Tyr Cys Ala Asp Leu Glu Met
 180 185

<210> 5401
 <211> 2674
 <212> DNA
 <213> Homo sapiens

<400> 5401
 nccctttcaa aagaagggtgc ccccgccctt ggcccggtggg taacgccatt taaggcccg
 60

ccccgggaat tttgggccag gtgtaagcgc cegtgtcccc gccacgtcgc ggacatggtg
120
atttcagaaa gtatggatat actcttcaga ataagaggag gccttgattt ggcttttcag
180
ctagctactc ctaatgaaat ttttctcaag aaggcactga aacatgtgtt gagtgcactg
240
tcaactaagc tgtcttcaaa cgcccttggtg ttcagaattt gccacagttc agtgtatata
300
tggcctagca gtgacataaa caccattcct ggagaactga ctgatgcttc tgcttgtaag
360
aacatactgc gctttattca atttgagcca gaagaagata taaaagaaa attcatgaga
420
aagaaggaca aaaagttatc agacatgcat caaatagtaa atatagatct tatgctggaa
480
atgtcaacct ccctggcagc tgtaacgccc atcattgaaa gggaaagcgg aggacaccat
540
tatgttaata tgactttacc tgcgatgca gttatatctg ttgctccaga agaaacatgg
600
ggaaaagttc gtaagctcct ggttgatgca attcataatc aactaactga catggaaaaa
660
tgtattttga aatatatgaa aagaacatct attgtggtcc ctgaaccact gcacttttta
720
ttaccaggga aaaaaatct tgtaacaatt tcatatcctt caggaatacc agatggccag
780
ctgcaggcct ataggaagga gttacatgat cttttcaatc tgcctcacga cagaccctat
840
ttcaaaaggt ctaatgctta tcactttcca gatgagccat acaaagatgg ttacattaga
900
aatccacata cttaccttaa tccacctaac atggagactg gtatgattta tgtggtccag
960
ggcatatatg gctatcatca ttatatgcag gatcgcatag atgacaatgg ctggggctgt
1020
gcttatcgat ctctgcagac tatctgctct tggttcaaac atcagggata cacagagagg
1080
tccattccaa cacacagaga aattcagcag gctctagtcg atgccgggga caaaccagca
1140
acatttgctg gatcgcgga atggattgga tctattgagg tgcagctggt actaaaccaa
1200
ttgatcggtg taacgtcaaa aatcctgttt gtcagccaag gttcagaaat tgcctctcaa
1260
ggacgggaac tggctaata tttccaaagt gaaggaaact cagttatgat cgggggagga
1320
gttttggccc acacaatact aggagttgca tggaatgaga ttacagggca gataaagttt
1380
ctgattctag atccacatta taccggtgct gaagacctgc aagttatttt ggaaaagggc
1440
tgggtcggtg ggaagggccc agatttttgg aacaaggatg catactataa cttatgtctt
1500
cctcagcgac caaatatgat ttaaaatc tggagtcaa agactgcagt agagtggat
1560
tataaatttg tgaataaaga atcagtttaa tttttcacat taaatcctgg ttctagtttg
1620
accattttaa ttatgacctt tttcaaaggt tgtaaatact gcacggagaa tgtattttta
1680

gacgttcctt taataactta aaagacaaaag catacacaac cagcatatta taggcatgta
 1740
 aatacatgtg ttcttaaagt gatcttcact tggaagaaaag tttttcgtcc ttctcagaag
 1800
 gagattagac acaacatatg gttaaagccaa aagcaggagc ttatagattt gcatgaaatg
 1860
 aaggcggttct tcagacttct tcataaccca cgtgacatct gtttttaaaa acacgttaac
 1920
 attaaaaact tttttttaaa aagagtttta tccccaaact tccaccatgc agtcccattt
 1980
 ttgggtctcta gactctggta agtataacca gtactaaaat gttaatgaga atgaaacaat
 2040
 actactagaa atacgagtgt cagtattaaa tggaataata aatgctatgc aaacaagaga
 2100
 tcactgcggg aggaaaaaag cagcagctct gagttactta ccagcacttc cttttccac
 2160
 tgggtattttc tacacttccg agactccgtt tctgtctgag cacggcaaca caatcattcc
 2220
 tgtcaggggtg ttcacttgct tttattgtct gcatacattt aattgttgta agaaacttgg
 2280
 cacagtctgg aaatccacat gaccaagcga gatcttcagc tgtttgcccg ttcttattac
 2340
 ataaactgaa aacaggataa aaacggagtg aaatgaaaca ttgaacttaa gtcttttttt
 2400
 tatactttac aagggaattt tgggctcata caaatgttgg ttgcagaaca gaagaggtaa
 2460
 aggatgcata aggaaattgc atttttggtc actattgtat cctcagcaac taacagaatc
 2520
 cagcatagag cgggcattcc agttctgaat gaatgtaga attatctgat gtttaataca
 2580
 gtgtatgagt acccaaaggt agtcaatggg aactatagaa tgggttttcc tgaaccgaaa
 2640
 ctgaagtaga atacagtcac aatgaacaaa attg
 2674

<210> 5402

<211> 507

<212> PRT

<213> Homo sapiens

<400> 5402

Xaa	Leu	Ser	Lys	Glu	Gly	Ala	Pro	Ala	Leu	Gly	Pro	Trp	Val	Thr	Pro
1				5					10					15	
Phe	Lys	Ala	Arg	Pro	Arg	Glu	Phe	Trp	Ala	Arg	Cys	Lys	Arg	Pro	Cys
			20					25					30		
Pro	Arg	His	Val	Ala	Asp	Met	Val	Ile	Ser	Glu	Ser	Met	Asp	Ile	Leu
		35					40					45			
Phe	Arg	Ile	Arg	Gly	Gly	Leu	Asp	Leu	Ala	Phe	Gln	Leu	Ala	Thr	Pro
	50					55				60					
Asn	Glu	Ile	Phe	Leu	Lys	Lys	Ala	Leu	Lys	His	Val	Leu	Ser	Asp	Leu
65				70					75					80	
Ser	Thr	Lys	Leu	Ser	Ser	Asn	Ala	Leu	Val	Phe	Arg	Ile	Cys	His	Ser
			85					90					95		
Ser	Val	Tyr	Ile	Trp	Pro	Ser	Ser	Asp	Ile	Asn	Thr	Ile	Pro	Gly	Glu

100	105	110
Leu Thr Asp Ala Ser Ala Cys Lys Asn Ile Leu Arg Phe Ile Gln Phe		
115	120	125
Glu Pro Glu Glu Asp Ile Lys Arg Lys Phe Met Arg Lys Lys Asp Lys		
130	135	140
Lys Leu Ser Asp Met His Gln Ile Val Asn Ile Asp Leu Met Leu Glu		
145	150	155
Met Ser Thr Ser Leu Ala Ala Val Thr Pro Ile Ile Glu Arg Glu Ser		
165	170	175
Gly Gly His His Tyr Val Asn Met Thr Leu Pro Val Asp Ala Val Ile		
180	185	190
Ser Val Ala Pro Glu Glu Thr Trp Gly Lys Val Arg Lys Leu Leu Val		
195	200	205
Asp Ala Ile His Asn Gln Leu Thr Asp Met Glu Lys Cys Ile Leu Lys		
210	215	220
Tyr Met Lys Arg Thr Ser Ile Val Val Pro Glu Pro Leu His Phe Leu		
225	230	235
Leu Pro Gly Lys Lys Asn Leu Val Thr Ile Ser Tyr Pro Ser Gly Ile		
245	250	255
Pro Asp Gly Gln Leu Gln Ala Tyr Arg Lys Glu Leu His Asp Leu Phe		
260	265	270
Asn Leu Pro His Asp Arg Pro Tyr Phe Lys Arg Ser Asn Ala Tyr His		
275	280	285
Phe Pro Asp Glu Pro Tyr Lys Asp Gly Tyr Ile Arg Asn Pro His Thr		
290	295	300
Tyr Leu Asn Pro Pro Asn Met Glu Thr Gly Met Ile Tyr Val Val Gln		
305	310	315
Gly Ile Tyr Gly Tyr His His Tyr Met Gln Asp Arg Ile Asp Asp Asn		
325	330	335
Gly Trp Gly Cys Ala Tyr Arg Ser Leu Gln Thr Ile Cys Ser Trp Phe		
340	345	350
Lys His Gln Gly Tyr Thr Glu Arg Ser Ile Pro Thr His Arg Glu Ile		
355	360	365
Gln Gln Ala Leu Val Asp Ala Gly Asp Lys Pro Ala Thr Phe Val Gly		
370	375	380
Ser Arg Gln Trp Ile Gly Ser Ile Glu Val Gln Leu Val Leu Asn Gln		
385	390	395
Leu Ile Gly Ile Thr Ser Lys Ile Leu Phe Val Ser Gln Gly Ser Glu		
405	410	415
Ile Ala Ser Gln Gly Arg Glu Leu Ala Asn His Phe Gln Ser Glu Gly		
420	425	430
Thr Pro Val Met Ile Gly Gly Gly Val Leu Ala His Thr Ile Leu Gly		
435	440	445
Val Ala Trp Asn Glu Ile Thr Gly Gln Ile Lys Phe Leu Ile Leu Asp		
450	455	460
Pro His Tyr Thr Gly Ala Glu Asp Leu Gln Val Ile Leu Glu Lys Gly		
465	470	475
Trp Cys Gly Trp Lys Gly Pro Asp Phe Trp Asn Lys Asp Ala Tyr Tyr		
485	490	495
Asn Leu Cys Leu Pro Gln Arg Pro Asn Met Ile		
500	505	

<210> 5403

<211> 451

<212> DNA

<213> Homo sapiens

<400> 5403

gcgccttccc cctcgacggc gccagctcct cggcctctag ctccaggatg tgctcgctccg
 60
 cacgcgctag ttgcgcgtgc tggatcaggc tcaggatctc cagcactgac aatggctcct
 120
 tcattctttgg gggctctggg accttgggtg ggggctctgg agctgcctcg cctgcaggca
 180
 ccactctctc agccagggaac gcacgctggg gctntggatc cagcctccag tctcaggaag
 240
 gccagtctcc gggcggcctc ccccgctgcc tcctcgctgc cgtgggctcg ggtcccatgc
 300
 agccggggcca ggaggccaaa atctgctgag ctctgcgta tccctggtag cagcacacgg
 360
 cccaagaaag agcggggctg cccatcccca gggctgcctg ccgccggccc gggggccagc
 420
 ccagccggaa gggggccagg cccgcaagct t
 451

<210> 5404

<211> 150

<212> PRT

<213> Homo sapiens

<400> 5404

Ala	Pro	Ser	Pro	Ser	Thr	Ala	Pro	Ala	Pro	Arg	Pro	Leu	Ala	Pro	Gly
1				5					10					15	
Cys	Ala	Arg	Pro	His	Ala	Leu	Val	Arg	Ala	Ala	Gly	Ser	Gly	Ser	Gly
			20					25				30			
Ser	Pro	Ala	Leu	Thr	Met	Ala	Pro	Ser	Ser	Leu	Gly	Ala	Leu	Gly	Pro
		35				40					45				
Trp	Val	Gly	Ala	Leu	Glu	Leu	Pro	Arg	Leu	Gln	Ala	Pro	Leu	Ser	Gln
	50					55				60					
Pro	Gly	Thr	His	Ala	Gly	Ala	Xaa	Asp	Pro	Arg	Pro	Ser	Leu	Arg	Lys
65					70				75					80	
Ala	Ser	Leu	Arg	Ala	Ala	Ser	Pro	Ala	Ala	Ser	Ser	Ser	Pro	Trp	Ala
			85					90					95		
Arg	Val	Pro	Cys	Ser	Arg	Ala	Arg	Arg	Pro	Lys	Ser	Ala	Glu	Leu	Leu
		100						105					110		
Arg	Ile	Pro	Gly	Thr	Ser	Thr	Arg	Pro	Lys	Lys	Glu	Arg	Gly	Cys	Pro
	115					120					125				
Ser	Pro	Gly	Leu	Pro	Ala	Ala	Gly	Pro	Gly	Pro	Ser	Pro	Ala	Gly	Arg
	130					135					140				
Gly	Pro	Gly	Pro	Gln	Ala										
145					150										

<210> 5405

<211> 1609

<212> DNA

<213> Homo sapiens

<400> 5405

atattggcag aattggaagc aaatgtacct ggagcgcagg tacttggtta tcaaataatg
60
cctggatttc ttaatatgaa gataaagttt gtgtgcgccc agtgtctgag aaacgggtcaa
120
gtcattgaac cagacaaaaa cagaaaatat tgtagtgcaa aagcaaggca ttcgtggacc
180
aaagaccggc gtgcgatgag agtgatgtct attgaacgta agaagtggat gaacatccgt
240
cctctcccca caaagaaaca aatgccttta cagtttgatc tgtgcaacca tattgcttct
300
gggaaaaaat gtcaatatgt gggaaaactgt tcctttgctc atagtcctga ggaaagagaa
360
gtttggactt acatgaagga gaatgggata caagatatgg agcaatttta cgaactatgg
420
ctcaagagtc aaaaaaatga aaaaagtga gacatagcca gtcagtcaaa caaggaaaat
480
ggaaaacaaa ttcacatgcc aacagattat gctgaagtta cagtggactt tcaactgctgg
540
atgtgtggga aaaactgcaa cagtgagaag cagtggcagg gccacatctc ctccgagaag
600
cacaagaga aggttttcca caccgaggac gaccagtact gctggcagca ccgcttccca
660
acaggctatt tcagtatttg tgataggat atgaatggca cctgcccaga aggaaacagc
720
tgtaaatattg cacatggaaa tgccgaactt catgaatggg aagaaagaag agatgcccta
780
aagatgaagc tcaacaaagc acgaaaagat cacttaattg gcccaaatga taatgacttt
840
ggaaaatata gttttttgtt taaagattta aactaatatg ctggctttta tgtatgatac
900
ctaatacagag cattgaccag aaaaattgaa agtgttctga ggcacatagc agaggagctg
960
cagatttcct gcttgatttg gcgtatatcg ttctctctga gcagcaaccc acagtaggta
1020
ggaaaatggg ctgtttcaca ggcctggcca cgctctcacg gaaccactgg catcagatgg
1080
tgaagtgact gctacccggg tgccatctgt tgaacagact tttggatgaa gtgtgttggg
1140
gaagaggata aggttatatc taggacaact ctttgagttg gtccttcata taagaatcgt
1200
gacggtaaga gaataaacac ttgtactggg atcagaatac atgatggatg aaattcttta
1260
catgttttag cagaatgaat ttgtttaata taataaagtt tgctacttat ctgtatgtag
1320
gttgctaaaa aggattttct taactcagat tttaagccaa ataaccattt aacactagta
1380
tttgtaaat ggggtatttt tctgtatttg tatgtttcac tataataagg gaattaagga
1440
taatgtgcat tgagaatatt ttgaaaaata attgactcaa attttatttc ttggtctttt
1500
gctgtttaaa tgatgatttt gaaagattaa acctgtactg ttggtattgt gttagtgtat
1560
ggaccaatac tgctgtaat aaagatttta tatataaaaa aaaaaaaaaa
1609

<210> 5406
 <211> 291
 <212> PRT
 <213> Homo sapiens

<400> 5406
 Ile Leu Ala Glu Leu Glu Ala Asn Val Pro Gly Ala Gln Val Leu Gly
 1 5 10 15
 Asn Gln Ile Met Pro Gly Phe Leu Asn Met Lys Ile Lys Phe Val Cys
 20 25 30
 Ala Gln Cys Leu Arg Asn Gly Gln Val Ile Glu Pro Asp Lys Asn Arg
 35 40 45
 Lys Tyr Cys Ser Ala Lys Ala Arg His Ser Trp Thr Lys Asp Arg Arg
 50 55 60
 Ala Met Arg Val Met Ser Ile Glu Arg Lys Lys Trp Met Asn Ile Arg
 65 70 75 80
 Pro Leu Pro Thr Lys Lys Gln Met Pro Leu Gln Phe Asp Leu Cys Asn
 85 90 95
 His Ile Ala Ser Gly Lys Lys Cys Gln Tyr Val Gly Asn Cys Ser Phe
 100 105 110
 Ala His Ser Pro Glu Glu Arg Glu Val Trp Thr Tyr Met Lys Glu Asn
 115 120 125
 Gly Ile Gln Asp Met Glu Gln Phe Tyr Glu Leu Trp Leu Lys Ser Gln
 130 135 140
 Lys Asn Glu Lys Ser Glu Asp Ile Ala Ser Gln Ser Asn Lys Glu Asn
 145 150 155 160
 Gly Lys Gln Ile His Met Pro Thr Asp Tyr Ala Glu Val Thr Val Asp
 165 170 175
 Phe His Cys Trp Met Cys Gly Lys Asn Cys Asn Ser Glu Lys Gln Trp
 180 185 190
 Gln Gly His Ile Ser Ser Glu Lys His Lys Glu Lys Val Phe His Thr
 195 200 205
 Glu Asp Asp Gln Tyr Cys Trp Gln His Arg Phe Pro Thr Gly Tyr Phe
 210 215 220
 Ser Ile Cys Asp Arg Tyr Met Asn Gly Thr Cys Pro Glu Gly Asn Ser
 225 230 235 240
 Cys Lys Phe Ala His Gly Asn Ala Glu Leu His Glu Trp Glu Glu Arg
 245 250 255
 Arg Asp Ala Leu Lys Met Lys Leu Asn Lys Ala Arg Lys Asp His Leu
 260 265 270
 Ile Gly Pro Asn Asp Asn Asp Phe Gly Lys Tyr Ser Phe Leu Phe Lys
 275 280 285
 Asp Leu Asn
 290

<210> 5407
 <211> 2010
 <212> DNA
 <213> Homo sapiens

<400> 5407
 ataaaaggga gaggagcgaa catggcagcg cgttggcggt tttggtgtgt ctctgtgacc
 60

atggtggtgg cgctgctcat cgtttgcgac gttccctcag cctctgcca aagaaagaag
120
gagatggtgt tatctgaaaa ggtagtcag ctgatggaat ggactaaca aagacctgta
180
ataagaatga atggagacaa gttccgtcgc cttgtgaaag cccaccgag aaattactcc
240
gttatcgtca tgttccactgc tctccaactg catagacagt gtgtcgtttg caagcaagct
300
gatgaagaat tccagatcct ggcaaaactcc tggcgatact ccagtgcatt caccaacagg
360
atatatttttg ccatgggtgga ttttgatgaa ggctctgatg tatttcagat gctaaacatg
420
aatcagctc caactttcat caactttcct gcaaaaggga aacccaaacg ggtgataca
480
tatgagttac aggtgcgggg ttttccagct gagcagattg cccggtggat cgcgcacaga
540
actgatgtca atattagagt gattagaccc ccaaattatg ctggtccctt tatgttggga
600
ttgcttttgg ctgttattgg tggacttgtg tatcttcgaa gaagtaatat ggaatttctc
660
tttaataaaa ctggatgggc ttttgcagct ttgtgttttg tgcttgcctat gacatctggt
720
caaatgtgga accatataag aggaccacca tatgcccata agaatcccca cacgggacat
780
gtgaattata tccatggaag cagtcaagcc cagtttgtag ctgaaacaca cattgttctt
840
ctgtttaatg gtggagttac cttaggaatg gtgcttttat gtgaagctgc tacctctgac
900
atggatattg gaaagcgaaa gataatgtgt gtggctggta ttggacttgt tgtattattc
960
ttcagttgga tgctctctat ttttagatct aaatatcatg gctaccata cagctttctg
1020
atgagttaaa aaggctccag agatatatag acactggagt actggaaatt gaaaaacgaa
1080
aatcgtgtgt gtttgaaaag aagaatgcaa cttgtatatt ttgtattacc tcttttttct
1140
aagtgattta aatagttaat catttaacca aagaagatgt gtagtgcctt aacaagcaat
1200
cctctgtcaa aatctgaggt atttgaaaat aattatcctc ttaaccttct cttcccagtg
1260
aactttatgg aacatttaat ttagtacaat taagtatatt ataaagatac tatgactgcc
1320
acctgccatt taccttctaa taaccctgcc atgtggtttg cagaaagaga tggatatagt
1380
agcctcagaa gaaatatttt atgtgggttt tttgttttct gttactagat ttcattggtg
1440
aggggatatg gttgacctt tactttttta tggagcagcc agtttttgtt aattactcac
1500
ttgtaaattg tgagattctg aattccttac ctgctattct tgtacttgct tcaggccaaa
1560
tctatgctgt ggttcttatg agacttgat gaagatgcc tgatttgatc agattgacca
1620
cggaataact actgccatgt aatctgtata gttccagata atttgtcatg aacattgaca
1680

gaatgacaat tttttgtatt tgctttttct ccctttaaga gcacattctt ctgtaaggag
 1740
 aaaggcagca ttctggctaa aatgtgtaga aggtaattta ctacacttat aaaatagtgt
 1800
 gacttttttg aaaattttga attagctttc atatgaagtg ccttaagtag actcttcatt
 1860
 tactttttctg gtaatggttt aaatatcatt tgttatgcat ttttaagata cagttcagaa
 1920
 tgacacattg tagtggcaaa gataaccaaa tgtctggctg tttgcttttt gaccatatca
 1980
 ataaactttt acaatctaaa aaaaaaaaaa
 2010

<210> 5408

<211> 335

<212> PRT

<213> Homo sapiens

<400> 5408

Met	Ala	Ala	Arg	Trp	Arg	Phe	Trp	Cys	Val	Ser	Val	Thr	Met	Val	Val
1				5					10					15	
Ala	Leu	Leu	Ile	Val	Cys	Asp	Val	Pro	Ser	Ala	Ser	Ala	Gln	Arg	Lys
			20					25					30		
Lys	Glu	Met	Val	Leu	Ser	Glu	Lys	Val	Ser	Gln	Leu	Met	Glu	Trp	Thr
		35					40					45			
Asn	Lys	Arg	Pro	Val	Ile	Arg	Met	Asn	Gly	Asp	Lys	Phe	Arg	Arg	Leu
	50					55					60				
Val	Lys	Ala	Pro	Pro	Arg	Asn	Tyr	Ser	Val	Ile	Val	Met	Phe	Thr	Ala
65					70					75					80
Leu	Gln	Leu	His	Arg	Gln	Cys	Val	Val	Cys	Lys	Gln	Ala	Asp	Glu	Glu
			85						90					95	
Phe	Gln	Ile	Leu	Ala	Asn	Ser	Trp	Arg	Tyr	Ser	Ser	Ala	Phe	Thr	Asn
			100					105					110		
Arg	Ile	Phe	Phe	Ala	Met	Val	Asp	Phe	Asp	Glu	Gly	Ser	Asp	Val	Phe
		115					120					125			
Gln	Met	Leu	Asn	Met	Asn	Ser	Ala	Pro	Thr	Phe	Ile	Asn	Phe	Pro	Ala
	130					135					140				
Lys	Gly	Lys	Pro	Lys	Arg	Gly	Asp	Thr	Tyr	Glu	Leu	Gln	Val	Arg	Gly
145					150					155					160
Phe	Ser	Ala	Glu	Gln	Ile	Ala	Arg	Trp	Ile	Ala	Asp	Arg	Thr	Asp	Val
			165					170						175	
Asn	Ile	Arg	Val	Ile	Arg	Pro	Pro	Asn	Tyr	Ala	Gly	Pro	Leu	Met	Leu
			180					185					190		
Gly	Leu	Leu	Leu	Ala	Val	Ile	Gly	Gly	Leu	Val	Tyr	Leu	Arg	Arg	Ser
		195					200					205			
Asn	Met	Glu	Phe	Leu	Phe	Asn	Lys	Thr	Gly	Trp	Ala	Phe	Ala	Ala	Leu
	210					215					220				
Cys	Phe	Val	Leu	Ala	Met	Thr	Ser	Gly	Gln	Met	Trp	Asn	His	Ile	Arg
225					230					235					240
Gly	Pro	Pro	Tyr	Ala	His	Lys	Asn	Pro	His	Thr	Gly	His	Val	Asn	Tyr
			245					250						255	
Ile	His	Gly	Ser	Gln	Ala	Gln	Phe	Val	Ala	Glu	Thr	His	Ile	Val	
			260				265					270			
Leu	Leu	Phe	Asn	Gly	Gly	Val	Thr	Leu	Gly	Met	Val	Leu	Leu	Cys	Glu

275	280	285
Ala Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys Ile Met Cys Val		
290	295	300
Ala Gly Ile Gly Leu Val Val Leu Phe Phe Ser Trp Met Leu Ser Ile		
305	310	315
Phe Arg Ser Lys Tyr His Gly Tyr Pro Tyr Ser Phe Leu Met Ser		
325	330	335

<210> 5409

<211> 2019

<212> DNA

<213> Homo sapiens

<400> 5409

```

ttttgaagcc tcagtcataa atttaatacaa ttctagggtg aatgctaaga aaagttttaa
60
ttgtgcaa at gtggtacata acatttcaaaa tataagtggga aggatcatca gtagtggtat
120
caaaatgcat aatacagaaa ctttttaaga aaggataaaa aattacactc aggaccata
180
actcttcttc attataagca tatgtagtga ttcattcatg cagggtttta tatgtagata
240
ggattttttt ttccttttca agaattccat tgtagccatg agatgaaaaa tgtattatgg
300
taatgggata gctttcttct attttgcttt tagtggttagg tttgctaaaa gcttatttaa
360
aattoccaa tgacataatg tgttttcaat aaggaggacg ctgccgtgtc caataccctt
420
ccctgtcat tgttcggtac catatctcct ggcttccttc tacatgggtc acttagtta
480
gaggaggcc aaggaggttc cgatttcagg cagtgtgtgg cagggttact gtcctagcaa
540
cctggctact cctcactgtg aacgtttctc ataggtgtca tatggcagga tgaaaaacat
600
atttgctcc cagtgaaga tggcacaggc tttgcccag ccagggtggc aagagaacag
660
aactcttaac cccttgctcg acaggtttga gttcaagggg ttggatgtc caagcagagg
720
gccaaaccct gatattatgaa gcatgctagg tcaacagcca gtcagaccac tcccacaaag
780
gctgccacaa aaactcccag ggaactgaga aaaatgttca ggggtggcaga actctgtggc
840
ccttctgcct ctttgagaa gtgttcaaag tagagaatat ccccgagccc caccagtg
900
catgggacca aggcctttcc atcctggtaa tcataagttt taggggaatc agctgccctg
960
ggcctgccag ggcacacat ccacagaagc agaagagagg agtcctccat agaagccatg
1020
gaggagccg agattgacac gcagggtgaa gtatctgcct cccacctcct accctccccg
1080
cagcctatag tctagcacag gcctggagtg cgggagcaac tgctacaatg ttcagttcaa
1140
tcagataaat tgggtgggtg tctcttcaga ttccagaaca cttggaaatg gtaattctgc
1200

```

caaaagaggc tctgtcagag atgatctggg tgacagattg cagttaaaaa catcatctat
 1260
 tgaacctctg gaagttacac tgaactttcg gtcagagaaa ctgctccttc ggattaaagg
 1320
 ctcactcatt ttttccagaa ataacttaat cgtctccttc ttttctggac ttgtacttga
 1380
 caaattcaga acttttccat ttacttttac aacggaatta ctgagcccaa accaatagaa
 1440
 gaaatcaa ataatgcacag ctttgaattc atatgcaaag cttaaatttt ctccattaac
 1500
 cacttcattt cctgggggga agaaattctt cactgcctct tgaaaatcaa actgaaagag
 1560
 agaggaacat tgcattgact gaagccggta actttctcca atcactgagg agatgaccat
 1620
 gtccatccct tgctctatct gtcttcttat cttgggggtgc ctctgtgtta caagaaacgc
 1680
 gtacgtcctt tcttttgagg tgtctttttt ggtctgtaca ttaataaaga acaacattgg
 1740
 tttgctcaat atagtttccc tgtagtcttt ataatacacag tagttgggtca gttccacata
 1800
 cctcttgatg tagctgctga ggcggttagag ctgcccgctg aggcgcacga ggccgtcacc
 1860
 gaagacgttg aagccccccc gcgcgcgcgc cggctccccg ggcccgccca ccacgagctg
 1920
 gtcgcgcctc agctggaagg caccgggctg caggcgcagc agctgagcca gcggcagcag
 1980
 ggccagctcg cagtcgcagg tccacaggct gcgaagctt
 2019

<210> 5410

<211> 198

<212> PRT

<213> Homo sapiens

<400> 5410

Met	Leu	Phe	Phe	Ile	Asn	Val	Gln	Thr	Lys	Lys	Asp	Thr	Ser	Lys	Glu
1				5					10					15	
Arg	Thr	Tyr	Ala	Phe	Leu	Val	Asn	Thr	Arg	His	Pro	Lys	Ile	Arg	Arg
			20					25					30		
Gln	Ile	Glu	Gln	Gly	Met	Asp	Met	Val	Ile	Ser	Ser	Val	Ile	Gly	Glu
			35				40					45			
Ser	Tyr	Arg	Leu	Gln	Ser	Met	Gln	Cys	Ser	Ser	Leu	Phe	Gln	Phe	Asp
	50					55					60				
Phe	Gln	Glu	Ala	Val	Lys	Asn	Phe	Phe	Pro	Pro	Gly	Asn	Glu	Val	Val
65					70				75					80	
Asn	Gly	Glu	Asn	Leu	Ser	Phe	Ala	Tyr	Glu	Phe	Lys	Ala	Asp	Ala	Leu
				85					90					95	
Phe	Asp	Phe	Phe	Tyr	Trp	Phe	Gly	Leu	Ser	Asn	Ser	Val	Val	Lys	Val
				100				105					110		
Asn	Gly	Lys	Val	Leu	Asn	Leu	Ser	Ser	Thr	Ser	Pro	Glu	Lys	Lys	Glu
				115			120					125			
Thr	Ile	Lys	Leu	Phe	Leu	Glu	Lys	Met	Ser	Glu	Pro	Leu	Ile	Arg	Arg
	130					135					140				
Ser	Ser	Phe	Ser	Asp	Arg	Lys	Phe	Ser	Val	Thr	Ser	Arg	Gly	Ser	Ile

145 150 155 160
 Asp Asp Val Phe Asn Cys Asn Leu Ser Pro Arg Ser Ser Leu Thr Glu
 165 170 175
 Pro Leu Leu Ala Glu Leu Pro Phe Pro Ser Val Leu Glu Ser Glu Glu
 180 185 190
 Thr Pro Asn Gln Phe Ile
 195

<210> 5411

<211> 2802

<212> DNA

<213> Homo sapiens

<400> 5411

nccaggtaaa tctgaggaac ttccccaagc ctttatttgc acccggtaaa tccaataata
 60
 ccaattttga ttttaaatgg gaggggggtc cttgcaggcc ccacatgaga ggggtggccct
 120
 tgaagaattc cttgggggtac ccacaggctt accagtttgg aaactcgcca ccccgagcag
 180
 aaggcagccc ggtattttgt gttatacaaa ccgcccccta aagacaacat tcccgccta
 240
 gtggaggagt acctggaacg cgccaccttc gtagccaatg acctcgactg gctcctggcc
 300
 ttgcctcacg ataaattctg gtgccagggtg atctttgacg agactctaca gaagtgcctg
 360
 gactcctacc tgcgctatgt cccccgaaa ttcgacgagg ggggtggcctc agccccctgag
 420
 gttgttgaca tgcagaagcg cctccatcga agtggttttc tcaccttctc ccgcatgtcc
 480
 actcacaagg aatccaaaga tcacttcatt tccccctctg cgtttgagga aatcctctac
 540
 aataacttcc tctttgacat tccaaagatc ctggacctct gcgtgctctt tggaaaaggc
 600
 aactcaccac tgctccagaa gatgatagga aacatcttta cacagcagcc aagttactac
 660
 agtgacctgg atgaaaccct gcctaccatc cttcagggtc tcagcaatat cctccagcac
 720
 tgtgggttgc aaggggacgg ggccaatacc acaccccaga agcttgagga gaggggcccga
 780
 ttgaccccca gtgacatgcc tctcctggaa ttaaaggaca ttgttctcta cctttgtgat
 840
 acctgcacca cactttgggc ctttctggat atcttcctt tggttgcca gaccttcag
 900
 aagcacgact tttgttacag actagcttcc ttctacgaag cagcaattcc cgaaatggag
 960
 tctgcaatta agaagaggag gcttgaagat agcaagcttc ttggtgacct gtggcagagg
 1020
 ctctcccatt ccaggaagaa gctaattggag attttccaca tcatcctgaa ccagatctgc
 1080
 ctcttccca tctagaaaag cagctgtgac aacattcagg gcttcatcga agagttcctt
 1140
 cagatcttca gctccttgct gcaggagaag aggttcctcc gggactatga tgcactcttc
 1200

```

cccgtggccg aagacatcag cttgctgcag caggcctcat cagtcttgga cgagacgcgg
1260
actgcctaca tcctccaggc agtcgagagt gcatgggaag ggggtggacag acggaagcc
1320
acagatgcta aagacccatc ggtgattgag gagcctaata gggagcctaa cggggtcacg
1380
gtgacagcag aggcagtcag tcaagcatca tcacatccgg agaactcgga ggaagaggag
1440
tgcattgggag cagccgcggc tgtgggcctt gccatgtgtg ggggtggaact ggactctctc
1500
atctcccaag tgaaggacct gctgccagac cttggtgagg gcttcacctt ggcctgcctg
1560
gagtactacc actacgaccc agagcaggtg atcaacaata tcctggagga gcggctggcc
1620
cccaccctca gccagctgga ccgcaacctt gacagagaaa tgaaaccaga ccctacaccc
1680
ctgctgacgt ctgccacaa cgtcttccag aatgacgagt ttgatgtgtt cagcagggac
1740
tcagtagacc tgagccgggt gcacaagggc aagagcacca ggaaggagga aaacacgcgg
1800
agtttgctga acgacaagcg tgcagtggcg gcacagcggc agcgctacga gcagtacagc
1860
gtggtgggtg aggaggtgcc actgcagcca ggcgagagcc tgccctacca cagtgtctac
1920
tacgaggatg agtacgatga cacatacgat ggcaaccagg tgggcgccaa tgatgcagac
1980
tctatgacga gctcatcagc cgcaggccat tcaccatccc aggtgctgag aaccaaagtg
2040
cctagagaag ggcaggagga ggatgacgac gatgaggaag acgatgctga cgaggaggct
2100
cccaagcccg accatthttgt tcaggaccct gcagtgtgta gagagaaggc agaagccagg
2160
cgcattggcct ttctcgccaa gaaagggtac cggcatgaca gctcaacagc agtggccggc
2220
agcccccgag gccatgggca gagccgcgag acaaccagg aacgcaggaa gaaggagcc
2280
aacaaggcga caagagccaa ccacaaccgg agaaccatgg ccgaccgcaa gaggagcaaa
2340
ggcatgatcc catcctgaga cctggtgcag ggccagtggg gaggcagcgg caccagactc
2400
accaggccgc gctcccatcg cctggggcct cctcactagg ggccccaagt tcaactcaac
2460
ccctcaacag cctcagcttt gcagcccctg agaaggccgc ctctcatcta ccagccagcc
2520
atgagcgctt tcctgcagaa cacacagtgc cttatgccac agccgaagaa tccgtggggc
2580
cggcaagcag gcaccttccc ccagctgcgc tagcgggaaa gagatgggga tggagtccca
2640
aggcaagcgc cccaaacctc ggcccaaacg acaccacttc ccctttaccc tggacagcag
2700
gaaacctgta tattcaaaaa cacaaaaagt cctgctaata aaatthttga ccctttcaaa
2760
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
2802

```

<210> 5412
 <211> 642
 <212> PRT
 <213> Homo sapiens

<400> 5412

```

Met Gln Lys Arg Leu His Arg Ser Val Phe Leu Thr Phe Leu Arg Met
 1           5           10           15
Ser Thr His Lys Glu Ser Lys Asp His Phe Ile Ser Pro Ser Ala Phe
      20           25           30
Gly Glu Ile Leu Tyr Asn Asn Phe Leu Phe Asp Ile Pro Lys Ile Leu
      35           40           45
Asp Leu Cys Val Leu Phe Gly Lys Gly Asn Ser Pro Leu Leu Gln Lys
      50           55           60
Met Ile Gly Asn Ile Phe Thr Gln Gln Pro Ser Tyr Tyr Ser Asp Leu
      65           70           75           80
Asp Glu Thr Leu Pro Thr Ile Leu Gln Val Phe Ser Asn Ile Leu Gln
      85           90           95
His Cys Gly Leu Gln Gly Asp Gly Ala Asn Thr Thr Pro Gln Lys Leu
      100          105          110
Glu Glu Arg Gly Arg Leu Thr Pro Ser Asp Met Pro Leu Leu Glu Leu
      115          120          125
Lys Asp Ile Val Leu Tyr Leu Cys Asp Thr Cys Thr Thr Leu Trp Ala
      130          135          140
Phe Leu Asp Ile Phe Pro Leu Ala Cys Gln Thr Phe Gln Lys His Asp
      145          150          155          160
Phe Cys Tyr Arg Leu Ala Ser Phe Tyr Glu Ala Ala Ile Pro Glu Met
      165          170          175
Glu Ser Ala Ile Lys Lys Arg Arg Leu Glu Asp Ser Lys Leu Leu Gly
      180          185          190
Asp Leu Trp Gln Arg Leu Ser His Ser Arg Lys Lys Leu Met Glu Ile
      195          200          205
Phe His Ile Ile Leu Asn Gln Ile Cys Leu Leu Pro Ile Leu Glu Ser
      210          215          220
Ser Cys Asp Asn Ile Gln Gly Phe Ile Glu Glu Phe Leu Gln Ile Phe
      225          230          235          240
Ser Ser Leu Leu Gln Glu Lys Arg Phe Leu Arg Asp Tyr Asp Ala Leu
      245          250          255
Phe Pro Val Ala Glu Asp Ile Ser Leu Leu Gln Gln Ala Ser Ser Val
      260          265          270
Leu Asp Glu Thr Arg Thr Ala Tyr Ile Leu Gln Ala Val Glu Ser Ala
      275          280          285
Trp Glu Gly Val Asp Arg Arg Lys Ala Thr Asp Ala Lys Asp Pro Ser
      290          295          300
Val Ile Glu Glu Pro Asn Gly Glu Pro Asn Gly Val Thr Val Thr Ala
      305          310          315          320
Glu Ala Val Ser Gln Ala Ser Ser His Pro Glu Asn Ser Glu Glu Glu
      325          330          335
Glu Cys Met Gly Ala Ala Ala Val Gly Pro Ala Met Cys Gly Val
      340          345          350
Glu Leu Asp Ser Leu Ile Ser Gln Val Lys Asp Leu Leu Pro Asp Leu
      355          360          365
Gly Glu Gly Phe Ile Leu Ala Cys Leu Glu Tyr Tyr His Tyr Asp Pro

```

```

      370              375              380
Glu Gln Val Ile Asn Asn Ile Leu Glu Glu Arg Leu Ala Pro Thr Leu
385              390              395              400
Ser Gln Leu Asp Arg Asn Leu Asp Arg Glu Met Lys Pro Asp Pro Thr
              405              410              415
Pro Leu Leu Thr Ser Arg His Asn Val Phe Gln Asn Asp Glu Phe Asp
              420              425              430
Val Phe Ser Arg Asp Ser Val Asp Leu Ser Arg Val His Lys Gly Lys
              435              440              445
Ser Thr Arg Lys Glu Glu Asn Thr Arg Ser Leu Leu Asn Asp Lys Arg
              450              455              460
Ala Val Ala Ala Gln Arg Gln Arg Tyr Glu Gln Tyr Ser Val Val Val
465              470              475              480
Glu Glu Val Pro Leu Gln Pro Gly Glu Ser Leu Pro Tyr His Ser Val
              485              490              495
Tyr Tyr Glu Asp Glu Tyr Asp Asp Thr Tyr Asp Gly Asn Gln Val Gly
              500              505              510
Ala Asn Asp Ala Asp Ser Met Thr Ser Ser Ser Ala Ala Gly His Ser
              515              520              525
Pro Ser Gln Val Leu Arg Thr Lys Val Pro Arg Glu Gly Gln Glu Glu
              530              535              540
Asp Asp Asp Asp Glu Glu Asp Asp Ala Asp Glu Glu Ala Pro Lys Pro
545              550              555              560
Asp His Phe Val Gln Asp Pro Ala Val Leu Arg Glu Lys Ala Glu Ala
              565              570              575
Arg Arg Met Ala Phe Leu Ala Lys Lys Gly Tyr Arg His Asp Ser Ser
              580              585              590
Thr Ala Val Ala Gly Ser Pro Arg Gly His Gly Gln Ser Arg Glu Thr
              595              600              605
Thr Gln Glu Arg Arg Lys Lys Glu Ala Asn Lys Ala Thr Arg Ala Asn
610              615              620
His Asn Arg Arg Thr Met Ala Asp Arg Lys Arg Ser Lys Gly Met Ile
625              630              635              640
Pro Ser

```

<210> 5413

<211> 1677

<212> DNA

<213> Homo sapiens

<400> 5413

```

agagatgggt gtgtaatgaa aattacaagg tcgttgaaca aggttagtag tgtcttgcct
60
ttttattctg tcatctcaaa cttcataaac agtcatacgt tctttgaaac gtagatttaa
120
tgtgtgcagt catttataaa tcaatgacat ttctcttttt tgtcataaaa ctgtatactg
180
aagaaattaa cgaatgcaca gtttctaaag ctgttgacatt tgtctgtgga atcataggtt
240
cccactaaga agaatttcag cattctggcc agaaatttga atacaattca agttgaagaa
300
atgtctgcct gtaacattag catccagggt cccagcatat ataataagga gcctaaaaat
360

```


ataataaatc ctcatgaaaa agttcaaatg aagtcaattt gtgcaaattc tcctataaag
 420
 gcacaacagg atcaattaca agtaaaaaac aatataaaaag caagtcttca caatgtcaaa
 480
 agttccttac ctctttttta tactaagtcc tctacttctg tggggcagtt gcagtctcct
 540
 accttgaatt cacctatcta tatgcaaaag caaggaaaaa atgaacatct tgcatttaat
 600
 accaaatcta aggttcaac agttggttca gaattggtac ttgtttctac caccgttcca
 660
 actgttcata atgtttctga tttggaaatg agctctactc tggactgttt acctgtgttg
 720
 gctgattggg aggatgtggt tttactgcca gcactcagc ctgaggaaaa cgtagactgt
 780
 acagttccca ttagtgactc agacttagag atttcattta attctggaga aagattaatg
 840
 gttttgaaag aattggaaat gtcaagtcac gaaaactttg gagacataga ggaaactcct
 900
 caaaaatctg agacttctaa gtctattgtg tacaagagtc ctcacactac tatttataat
 960
 gtaaaagaag ccaaagatcc aggttcagat atttctgcct ttaagttacc tgaacacaaa
 1020
 tcaagtacct tcaacagagt taatgccaat atgtctcacc ctttagtttt ggggaaacat
 1080
 cctcttcttt caggtggtac caaaaggaat ccatgcagtc cccaagcttt cccaccagca
 1140
 aaaaaacaac ctttactat tcatgaagaa aagcctacat catctgattg ctccccagta
 1200
 agaagttctt cctggaggcg tctcccatct atattaactt ctacagttaa cctacaagag
 1260
 ccattggaaga gtgggaaaat gacacctcca ttatgcaagt gtggtcggag atctaagaga
 1320
 cttgttgttt ctaataatgg accgaacat ggaaaagtct tctattgttg ccctatcggg
 1380
 aaataccaag aaaacagaaa atgttgtggt tatttcaaat gggaacaaac acttcaaaag
 1440
 gaaagagcca acagcatggt tccatctcat tccacagggg gactcacttt tagttctcca
 1500
 gaaacaagcc atatttgtga cagaaattta agtatttcca ccaaaaattc ttgagactc
 1560
 aggccttcaa tgaggaattg ataaccttc atgtatgaat cctaattggt ccttgaattt
 1620
 ccaaacatga gtattctgat aacatcttac actattttat ttttatttta tatatta
 1677

<210> 5414

<211> 426

<212> PRT

<213> Homo sapiens

<400> 5414

Met Ser Ala Cys Asn Ile Ser Ile Gln Gly Pro Ser Ile Tyr Asn Lys
 1 5 10 15
 Glu Pro Lys Asn Ile Ile Asn Pro His Glu Lys Val Gln Met Lys Ser

20 25 30
 Ile Cys Ala Asn Ser Pro Ile Lys Ala Gln Gln Asp Gln Leu Gln Val
 35 40 45
 Lys Asn Asn Ile Lys Ala Ser Leu His Asn Val Lys Ser Ser Leu Pro
 50 55 60
 Leu Phe Asn Thr Lys Ser Ser Thr Ser Val Gly Gln Leu Gln Ser Pro
 65 70 75 80
 Thr Leu Asn Ser Pro Ile Tyr Met Gln Lys Gln Gly Lys Asn Glu His
 85 90 95
 Leu Ala Phe Asn Thr Lys Ser Lys Ala Ser Thr Val Gly Ser Glu Leu
 100 105 110
 Val Leu Val Ser Thr Thr Val Pro Thr Val His His Val Ser Asp Leu
 115 120 125
 Glu Met Ser Ser Thr Leu Asp Cys Leu Pro Val Leu Ala Asp Trp Glu
 130 135 140
 Asp Val Val Leu Leu Pro Ala Ser Gln Pro Glu Glu Asn Val Asp Cys
 145 150 155 160
 Thr Val Pro Ile Ser Asp Ser Asp Leu Glu Ile Ser Phe Asn Ser Gly
 165 170 175
 Glu Arg Leu Met Val Leu Lys Glu Leu Glu Met Ser Ser His Glu Asn
 180 185 190
 Phe Gly Asp Ile Glu Glu Thr Pro Gln Lys Ser Glu Thr Ser Lys Ser
 195 200 205
 Ile Val Tyr Lys Ser Pro His Thr Thr Ile Tyr Asn Val Lys Glu Ala
 210 215 220
 Lys Asp Pro Gly Ser Asp Ile Ser Ala Phe Lys Leu Pro Glu His Lys
 225 230 235 240
 Ser Ser Thr Phe Asn Arg Val Asn Ala Asn Met Ser His Pro Leu Val
 245 250 255
 Leu Gly Lys His Pro Leu Leu Ser Gly Gly Thr Lys Arg Asn Pro Cys
 260 265 270
 Ser Pro Gln Ala Phe Pro Pro Ala Lys Lys Gln Pro Phe Thr Ile His
 275 280 285
 Glu Glu Lys Pro Thr Ser Ser Asp Cys Ser Pro Val Arg Ser Ser Ser
 290 295 300
 Trp Arg Arg Leu Pro Ser Ile Leu Thr Ser Thr Val Asn Leu Gln Glu
 305 310 315 320
 Pro Trp Lys Ser Gly Lys Met Thr Pro Pro Leu Cys Lys Cys Gly Arg
 325 330 335
 Arg Ser Lys Arg Leu Val Val Ser Asn Asn Gly Pro Asn His Gly Lys
 340 345 350
 Val Phe Tyr Cys Cys Pro Ile Gly Lys Tyr Gln Glu Asn Arg Lys Cys
 355 360 365
 Cys Gly Tyr Phe Lys Trp Glu Gln Thr Leu Gln Lys Glu Arg Ala Asn
 370 375 380
 Ser Met Val Pro Ser His Ser Thr Gly Gly Leu Thr Phe Ser Ser Pro
 385 390 395 400
 Glu Thr Ser His Ile Cys Asp Arg Asn Leu Ser Ile Ser Thr Lys Asn
 405 410 415
 Ser Leu Arg Leu Arg Pro Ser Met Arg Asn
 420 425

<210> 5415

<211> 1493

<212> DNA

<213> Homo sapiens

<400> 5415

ntcagcctta cagagactgg aaaagaagcc caaaccaagg ccccagagag gtcccccagg
60
ccccttttgg tccctgagcc tcagctggag gtgggggggtg cctgcagtgc gctggctcag
120
tctccttctg aaaagctgga tccagcttgt ttgaagccct tgagctgac ttagatccgg
180
cgcaggagac caacgcctgc catgctgttc cggctctcag agcactcctc accagaggag
240
gaagcctccc cccaccagag agcctcagga gaggggcacc atctcaagtc gaagagaccc
300
aaccctgtg cctacacacc accttcgctg aaagctgtgc agcgcattgc tgagtctcac
360
ctgcagtcta tcagcaattt gaatgagaac caggcctcag aggaggagga tgagctgggg
420
gagcttcggg agctgggtta tccaagagag gaagatgagg aggaagagga ggatgatgaa
480
gaagaggaag aagaagagga cagccaggct gaagtcctga aggtcatcag gcagtctgct
540
gggcaaaaaga caacctgtgg ccagggtctg gaagggccct gggagcgccc acccctctg
600
gatgagtccg agagagatgg aggctctgag gaccaagtgg aagaccacgc actaagttag
660
cctggggagg aacctcagcg cccttcccc tctgagcctg gcacataggc acccagcctg
720
catctcccag gaggaagtgg aggggacatc gctgttcccc agaaaccac tctatcctca
780
ccctgttttg tgctcttccc ctgcctgct agggctgcgg cttctgactt ctagaagact
840
aaggetggtc tgtgtttgct tgtttgceca cctttggctg ataccagag aacctgggca
900
cttgcctcct gatgccacc cctgccagtc attcctccat tcaccacgag ggaggtggga
960
tgtgagacag cccacattgg aaaatccaga aaaccgggaa cagggatttg cccttcacaa
1020
ttctactccc cagatcctct cccctggaca caggagaccc acagggcagg accctaagat
1080
ctggggaaag gaggtcctga gaaccttgag gtacccttag atccttttct acccactttc
1140
ctatggagga ttccaagtca ccacttctct caccggcttc taccagggtc caggactaag
1200
gcgtttttct ccatagcctc aacatttttg gaatcttccc ttaatcacc ttgctcctcc
1260
tgggtgcctg gaagatggac tggcagagac ctctttgttg cgttttgtgc tttgatgcc
1320
ggaatgccgc ctagtttatg tccccggtag ggcacacagc ggggggcgac aggttttctc
1380
tgtccccag ctgctctgcc cctttccctc tcttccctga ctccaggcct gaacccctcc
1440
cgtgctgtaa taaatctttg taaataaaaa aaaaaaaaaa aaaaaaaaaa aaa
1493

<210> 5416
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 5416
 Xaa Ser Leu Thr Glu Thr Gly Lys Glu Ala Gln Thr Lys Ala Pro Glu
 1 5 10 15
 Arg Ser Pro Arg Pro Leu Trp Phe Pro Glu Pro Gln Leu Glu Val Gly
 20 25 30
 Gly Ala Cys Ser Ala Leu Ala Gln Ser Pro Ser Glu Lys Leu Asp Pro
 35 40 45
 Ala Cys Leu Lys Pro Leu Ser
 50 55

<210> 5417
 <211> 2087
 <212> DNA
 <213> Homo sapiens

<400> 5417
 tccacgcacc tgccatgtgc caggcactaa tccagatgcc ggggatatat ttgtaaaciaa
 60
 aacctaccac cctcatggat aaagaagggt gagagtata aaggagactg ttctagataa
 120
 catggtcaga gaaggtctct ctgaagaggt gacttttttag cagagacttg aaggagatga
 180
 gagaataagc catgccagca tctgagatga agagcattcc agacagaaag aacagcaagc
 240
 gcagaggccc tgaggtggcc catatctggc gtgttcaagg agtagccata ggaggccagg
 300
 atggctgcaa ttgatgagga aggagggaga gagataggag atgaagtcaa tatattggtg
 360
 aaggaacaga cacagttagg ggtcaagact ctcatgaggt tactcaagga accagagaaa
 420
 gaacgggact cagactcaga tttctcccct cttcagcaga ctgagggatg ccagcgaaga
 480
 gacaagcact tccgtcatgc agaaaacccc catcatcctc tcaaacctc cagcagagcg
 540
 gccctcttgg agaagcccat cgttctcatg aagccacggg aggaggggaa ggggcctgtg
 600
 gccgtgacag gtgcctctac ccctgagggc accgccccac cccccctgc agccctgcg
 660
 ccaccaagg gggagaagga ggggcagaga cccacacagc ctgtgtacca gatccagaac
 720
 cggggcatgg gcactgccgc accagcagcc atggaccctg tcgtgggtca ggccaaacta
 780
 ctgccccag agcgcatgaa gcacagcatc aagttggtgg atgaccagat gaattggtgt
 840
 gacagtgcc tccagtagct gttggatcag actgatgtgt tgggtggttg tgcctgggc
 900
 ctccagggga caggcaagtc catgggtcatg tcattgttgt cagccaacac tccagaggag
 960

gaccagagga cttatgtttt ccgggcccag agcgtgaaa tgaaggaacg agggggcaac
 1020
 cagaccagtg gcacgactt ctttattacc caagaacgga ttgttttctt ggacacacag
 1080
 cccatcctga gcccttctat cctagaccat ctcatcaata atgaccgcaa actgcctcca
 1140
 gagtacaacc ttccccacac ttacgttgaa atgcagtcac tccagattgc tgccttcctt
 1200
 ttacagggtc gccatgtggt gattgttgtc caggactggt tcacagacct cagtctctac
 1260
 aggctgtggg acctgggggt caagtgaag agcaacagcc actcacccca aacccaagg
 1320
 ttcttgaga cagcagagat ggtgaagccc tccaccccat ccccagcca cgagtccagc
 1380
 agctcatcgg gctccgatga aggcaccgag tactaccccc acctagtctt cttgcagaac
 1440
 aaagctcgcc gagaggactt ctgtcctcgg aagctgcggc agatgcacct gatgattgac
 1500
 cagctcatgg cccactccca cctgcgttac aagggaactc tgtccatgtt acaatgcaat
 1560
 gtcttcccgg ggcttccacc tgacttcttg gactctgagg tcaacttatt cctggtaccc
 1620
 ttcatggaca gtgaagcaga gagtgaaaac ccaccaagag caggacctgg ttccagccca
 1680
 ctcttctccc tgetgcctgg gtatcgtggc caccacagtt tccagtcctt ggtgagcaag
 1740
 ctccggagcc aagtgatgtc catggcccgg ccacagctgt cacacacgat cctcaccgag
 1800
 aagaactggt tccactacgc tgcccggatc tgggatgggg tgagaaagtc ctctgctctg
 1860
 gcagagtaca gccgcctgct ggcctgaggc caaggagagg aatgtcatgc aggggacctc
 1920
 ctgggtccgc agtgtactgc gagggagcac agatgtccat ccccgctgg ggtggagagc
 1980
 ggcagcaggc ctgatggatg agggatcgtg gcttcccggc ccagagacat gaggtgtcca
 2040
 gggccaggcc cccaccctc agttggggct gttccggggg tgactgt
 2087

<210> 5418

<211> 528

<212> PRT

<213> Homo sapiens

<400> 5418

Met	Ala	Ala	Ile	Asp	Glu	Glu	Gly	Gly	Arg	Glu	Ile	Gly	Asp	Glu	Val
1			5					10					15		
Asn	Ile	Leu	Val	Lys	Glu	Gln	Thr	Gln	Leu	Gly	Val	Lys	Thr	Leu	Met
		20					25				30				
Arg	Leu	Leu	Lys	Glu	Pro	Glu	Lys	Glu	Arg	Asp	Ser	Asp	Ser	Asp	Phe
		35				40				45					
Ser	Pro	Leu	Gln	Gln	Thr	Glu	Gly	Cys	Gln	Arg	Arg	Asp	Lys	His	Phe
	50				55					60					
Arg	His	Ala	Glu	Asn	Pro	His	His	Pro	Leu	Lys	Thr	Ser	Ser	Arg	Ala

65	70	75	80
Ala Pro Leu Glu Lys Pro Ile Val Leu Met Lys Pro Arg Glu Glu Gly			
85	90	95	
Lys Gly Pro Val Ala Val Thr Gly Ala Ser Thr Pro Glu Gly Thr Ala			
100	105	110	
Pro Pro Pro Pro Ala Ala Pro Ala Pro Pro Lys Gly Glu Lys Glu Gly			
115	120	125	
Gln Arg Pro Thr Gln Pro Val Tyr Gln Ile Gln Asn Arg Gly Met Gly			
130	135	140	
Thr Ala Ala Pro Ala Ala Met Asp Pro Val Val Gly Gln Ala Lys Leu			
145	150	155	160
Leu Pro Pro Glu Arg Met Lys His Ser Ile Lys Leu Val Asp Asp Gln			
165	170	175	
Met Asn Trp Cys Asp Ser Ala Ile Glu Tyr Leu Leu Asp Gln Thr Asp			
180	185	190	
Val Leu Val Val Gly Val Leu Gly Leu Gln Gly Thr Gly Lys Ser Met			
195	200	205	
Val Met Ser Leu Leu Ser Ala Asn Thr Pro Glu Glu Asp Gln Arg Thr			
210	215	220	
Tyr Val Phe Arg Ala Gln Ser Ala Glu Met Lys Glu Arg Gly Gly Asn			
225	230	235	240
Gln Thr Ser Gly Ile Asp Phe Phe Ile Thr Gln Glu Arg Ile Val Phe			
245	250	255	
Leu Asp Thr Gln Pro Ile Leu Ser Pro Ser Ile Leu Asp His Leu Ile			
260	265	270	
Asn Asn Asp Arg Lys Leu Pro Pro Glu Tyr Asn Leu Pro His Thr Tyr			
275	280	285	
Val Glu Met Gln Ser Leu Gln Ile Ala Ala Phe Leu Phe Thr Val Cys			
290	295	300	
His Val Val Ile Val Val Gln Asp Trp Phe Thr Asp Leu Ser Leu Tyr			
305	310	315	320
Arg Leu Trp Asp Leu Gly Cys Lys Cys Lys Ser Asn Ser His Ser Pro			
325	330	335	
Gln Thr Pro Arg Phe Leu Gln Thr Ala Glu Met Val Lys Pro Ser Thr			
340	345	350	
Pro Ser Pro Ser His Glu Ser Ser Ser Ser Ser Gly Ser Asp Glu Gly			
355	360	365	
Thr Glu Tyr Tyr Pro His Leu Val Phe Leu Gln Asn Lys Ala Arg Arg			
370	375	380	
Glu Asp Phe Cys Pro Arg Lys Leu Arg Gln Met His Leu Met Ile Asp			
385	390	395	400
Gln Leu Met Ala His Ser His Leu Arg Tyr Lys Gly Thr Leu Ser Met			
405	410	415	
Leu Gln Cys Asn Val Phe Pro Gly Leu Pro Pro Asp Phe Leu Asp Ser			
420	425	430	
Glu Val Asn Leu Phe Leu Val Pro Phe Met Asp Ser Glu Ala Glu Ser			
435	440	445	
Glu Asn Pro Pro Arg Ala Gly Pro Gly Ser Ser Pro Leu Phe Ser Leu			
450	455	460	
Leu Pro Gly Tyr Arg Gly His Pro Ser Phe Gln Ser Leu Val Ser Lys			
465	470	475	480
Leu Arg Ser Gln Val Met Ser Met Ala Arg Pro Gln Leu Ser His Thr			
485	490	495	
Ile Leu Thr Glu Lys Asn Trp Phe His Tyr Ala Ala Arg Ile Trp Asp			

	500		505		510
Gly Val Arg Lys Ser Ser Ala Leu Ala Glu Tyr Ser Arg Leu Leu Ala					
515		520		525	

<210> 5419
 <211> 989
 <212> DNA
 <213> Homo sapiens

<400> 5419
 ttttcgtcca ggagtcggag gagcaagtcc aggtcccgtt cccgaaggcg ccaccagcgg
 60
 aagtacaggc gctactcgcg gtcatactcg cggagccggg cgcgatcccg cagccgccgt
 120
 taccgagaga ggcgctacgg gttcaccagg agatactacc ggtctccttc gcggtaccgg
 180
 tcccggtccc gtagcaggtc gcgctctcgg ggaaggctcg actgcggaag ggcgtacgcg
 240
 atcgcgcggg gacagcgcta ctacggcttt ggtcgcacag tgtaccggga ggagcacagc
 300
 agatggaggg acagatccag gacgaggctg cggagcagaa ccccctttcg cttaatgtaa
 360
 aaagatcgaa tggagctggt agaaatagca aaaaccaatg cagcgaaagc tctaggaaca
 420
 accaacattg acttgccagc tagtctcaga actgttcctt cagccaaaga aacaagccgt
 480
 ggaatagggt tatcaagtaa tgggtgcaaag cctgaaaaat catgaatgtg gtctgcagac
 540
 attgatgaag aaaatctggt gctgtcggaa aaggtaacag aagatggaac tcgaaatccc
 600
 aatgaaaaac ctaccagca aagaagcata gcttttagct ctaataattc tgtagcaaag
 660
 ccaatacaaa aatcagctaa agctgccaca gaagaggcat cttcaagatc accaaaaata
 720
 gatcagaaaa aaagtccata tggactgtgg atacctatct aaaagaagaa aactgatggc
 780
 taagtttgca tgaaaactgc actttattgc aagttagtgt ttctagcatt atcccatccc
 840
 tttgagccat tcaggggtac ttgtgcattt aaaaaccaac acaaaaagat gtaaatactt
 900
 aacactcaaa tattaacatt ttaggtttct cttgcagata tgagagatag cacagatgga
 960
 ccaaagggtta tgcacagggt ggagtcctt
 989

<210> 5420
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 5420
 Phe Ser Ser Arg Ser Arg Arg Ser Lys Ser Arg Ser Arg Ser Arg Arg
 1 5 10 15
 Arg His Gln Arg Lys Tyr Arg Arg Tyr Ser Arg Ser Tyr Ser Arg Ser

```

                20                25                30
Arg Ser Arg Ser Arg Ser Arg Arg Tyr Arg Glu Arg Arg Tyr Gly Phe
      35                40                45
Thr Arg Arg Tyr Tyr Arg Ser Pro Ser Arg Tyr Arg Ser Arg Ser Arg
      50                55                60
Ser Arg Ser Arg Ser Arg Gly Arg Ser Tyr Cys Gly Arg Ala Tyr Ala
65      70                75                80
Ile Ala Arg Gly Gln Arg Tyr Tyr Gly Phe Gly Arg Thr Val Tyr Pro
      85                90                95
Glu Glu His Ser Arg Trp Arg Asp Arg Ser Arg Thr Arg Ser Arg Ser
      100                105                110
Arg Thr Pro Phe Arg Leu Ser Glu Lys Asp Arg Met Glu Leu Leu Glu
      115                120                125
Ile Ala Lys Thr Asn Ala Ala Lys Ala Leu Gly Thr Thr Asn Ile Asp
      130                135                140
Leu Pro Ala Ser Leu Arg Thr Val Pro Ser Ala Lys Glu Thr Ser Arg
145      150                155                160
Gly Ile Gly Val Ser Ser Asn Gly Ala Lys Pro Glu Lys Ser
      165                170

```

<210> 5421

<211> 1239

<212> DNA

<213> Homo sapiens

<400> 5421

```

nccagctgcc gctgtcgtct ttgcttcagc cgcagtcgcc actggctgcc tgagggtgctc
60
ttacagcctg ttccaagtgt ggcttaatcc gtctccacca ccagatcttt ctccgtggat
120
tcctctgcta agaccgctgc catgccagtg acggttaacc gcaccacat cacaaccacc
180
acgacgtcat cttcgggcct ggggtcccc atgatcgtgg ggtcccctcg ggccctgaca
240
cagcccttg gttctcctcg cctgctgcag ctggtgtcta cctgcgtggc cttctcgtg
300
gtggctagcg tgggcgcctg gacggggctc atgggcaact ggtccatgtt cacctgggtg
360
ttctgcttct ccgtgaccct gatcatctc atcgtggagc tgtgcgggct ccaggcccg
420
ttccccctgt cttggcgcaa cttccccatc accttcgct gctatgcggc cctcttctg
480
ctctcggcct ccatcatcta ccccaccacc tatgtccagt tcctgtccca cggccgttcg
540
cgggaccacg ccatcgccgc caccttcttc tctgcatcg cgtgtgtggc ttacgccacc
600
gaagtggcct ggaccggggc cgggcccggc gagatcactg gctatatggc caccgtaccc
660
gggctgctga aggtgctgga gaccttcgtt gcctgcatca tcttcgcgtt catcagcgac
720
cccaacctgt accagcacca gccggccctg gagtggtgcg tggcggtgta cgccatctgc
780
ttcatcctag cggccatcgc catcctgctg aacctggggg agtgaccaa cgtgctaccc
840

```


atcccccttcc ccagcttcct gtcggggctg gccttggtgc tgcctcctc tatgccaccg
 900
 cccttggtct ctggccctc taccagttcg atgagaagta tggcggccag cctcggcgct
 960
 cgagagatgt aagctgcagc cgcagccatg cctactacgt gtgtgcctgg gaccgcccag
 1020
 tggctgtggc catcctgacg gccatcaacc tactggcgta tgtggctgac ctggtgcact
 1080
 ctgcccacct gggttttgc aaggtttaag actctcccaa gaggtcccg ttccctctcc
 1140
 aacctctttg ttctgtttgc ccgagtttcc tttatggagt acttctttcc cccgcctttc
 1200
 gtctgttttc ctttctctgt cttccctccc ttcacgcgt
 1239

<210> 5422

<211> 276

<212> PRT

<213> Homo sapiens

<400> 5422

Met	Pro	Val	Thr	Val	Thr	Arg	Thr	Thr	Ile	Thr	Thr	Thr	Thr	Thr	Ser
1				5					10					15	
Ser	Ser	Gly	Leu	Gly	Ser	Pro	Met	Ile	Val	Gly	Ser	Pro	Arg	Ala	Leu
			20					25					30		
Thr	Gln	Pro	Leu	Gly	Leu	Leu	Arg	Leu	Leu	Gln	Leu	Val	Ser	Thr	Cys
			35				40					45			
Val	Ala	Phe	Ser	Leu	Val	Ala	Ser	Val	Gly	Ala	Trp	Thr	Gly	Ser	Met
	50					55					60				
Gly	Asn	Trp	Ser	Met	Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Val	Thr	Leu
65					70					75					80
Ile	Ile	Leu	Ile	Val	Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro	Leu
			85					90						95	
Ser	Trp	Arg	Asn	Phe	Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu	Phe
			100					105					110		
Cys	Leu	Ser	Ala	Ser	Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe	Leu
			115				120					125			
Ser	His	Gly	Arg	Ser	Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe	Ser
	130					135					140				
Cys	Ile	Ala	Cys	Val	Ala	Tyr	Ala	Thr	Glu	Val	Ala	Trp	Thr	Arg	Ala
145					150					155					160
Arg	Pro	Gly	Glu	Ile	Thr	Gly	Tyr	Met	Ala	Thr	Val	Pro	Gly	Leu	Leu
			165					170						175	
Lys	Val	Leu	Glu	Thr	Phe	Val	Ala	Cys	Ile	Ile	Phe	Ala	Phe	Ile	Ser
			180					185					190		
Asp	Pro	Asn	Leu	Tyr	Gln	His	Gln	Pro	Ala	Leu	Glu	Trp	Cys	Val	Ala
		195					200					205			
Val	Tyr	Ala	Ile	Cys	Phe	Ile	Leu	Ala	Ala	Ile	Ala	Ile	Leu	Leu	Asn
	210					215				220					
Leu	Gly	Glu	Cys	Thr	Asn	Val	Leu	Pro	Ile	Pro	Phe	Pro	Ser	Phe	Leu
225					230					235					240
Ser	Gly	Leu	Ala	Leu	Cys	Leu	Ser	Ser	Ser	Met	Pro	Pro	Pro	Leu	Phe
			245							250				255	
Ser	Gly	Pro	Ser	Thr	Ser	Ser	Met	Arg	Ser	Met	Ala	Ala	Ser	Leu	Gly

260 265 270
Ala Arg Glu Met
275

<210> 5423
<211> 2427
<212> DNA
<213> Homo sapiens

<400> 5423
nccgcggtt tgcagagcag gatgaatgtg atagaccacg tgcgggacat ggcggccgcg
60
gggctgcact ccaacgtgcg gctcctcagc agcttggttac ttacaatgag taataacaac
120
cctgagttat tctccccacc tcagaagtac cagcttttgg tgtatcatgc agattctctc
180
tttcatgata aggaatatcg gaatgctgtg agtaagtata ccatggcttt acagcagaag
240
aaagcgctaa gtaaaacttc aaaagtgaga ctttcaactg gaaattctgc atctactcca
300
caaagtcagt gtcttccatc tgaaattgaa gtgaaataca aaatggctga atgttataca
360
atgctaaaac aagataaaga tgccattgct atacttgatg ggatcccttc aagacaaaga
420
actcccaaaa taaacatgat gctggcaaac ctgtacaaga aggctgggtca ggagcgccct
480
tcagtcacca gctataagga ggtgctgagg cagtgcccat tagcccttga tgccattcta
540
ggcttggtgt ccctttctgt aaaaggggca gaggtggcat ccatgacaat gaatgtgatc
600
caaaccgtgc ctaacttga ctggctctct gtgtggatca aagcgatgc ttttgtgcac
660
actggtgaca actcaagagc aatcagtacc atctgttcac tagagaaaaa atccttattg
720
cgagataacg tggacctatt gggagccttg gcagatctgt acttcagagc tggagacaat
780
aaaaactctg tcctcaagtt tgaacaggca cagatgttgg atccttatct gataaaagga
840
atggatgtat atggctacct actggcacga gaagggcggc tagaggatgt tgagaacctt
900
ggatgccgcc ttttcaatat ctctgatcag catgcagaac cgtgggtggt ttctggctgt
960
cacagcttct atagcaaacg ctactcccg gccctctatt taggagccaa ggccattcag
1020
ctgaacagta atagtgttca agctctgcta cttaagggag cagcacttag gaacatgggc
1080
agagtccaag aagcaataat ccactttcgg gaggccatac ggctcgacc ttgtcgctta
1140
gattgttatg aaggctctat cgaatgttac ttagcctcca acagtattcg agaagcaatg
1200
gtaatggcta acaacgttta caaaactctg ggagcaaata cacagaccct taccctttta
1260
gccaccgttt gtcttgaaga ccagtgaca caggagaaag ccaaacatt attagataaa
1320

gccctgaccc aaaggccaga ttacattaag gctgtggtga aaaaagcaga actacttagc
 1380
 agagaacaga aatatgaaga tggaattgct ttgctgagga acgactggc taatcagagt
 1440
 gactgtgtcc tgcacgcat cctaggagat ttcctttag ctgtcaatga gtatcaggag
 1500
 gcaatggacc agtatagtat agcactaagt ttggacccca atgaccagaa gtctctagag
 1560
 gggatgcaga agatggagaa ggaggagagt ccacgcatg ccactcagga ggaggatgtg
 1620
 gacgacatgg aagggagtgg ggaagaagg gacctggagg gcagcgacag tgaggcgcc
 1680
 cagtgggctg accaggagca gtggttcggc atgagtgagg gggcggcagc tccatggccg
 1740
 cagtggcctg ccctgctctg agcacttccg tggactgaag gaaccgtagg agcctgctct
 1800
 cagaaggaca atgattcagc atgtgattgc agcaggggtc tctgccccct cgctcccaat
 1860
 tcctagtcgt gacttcattt ctaaaacaga gcctgaccaa ccttccatgt atctccatcc
 1920
 tcccctgctc cagccagga ggactgaggg agtgccccga gaccacgca catgttgggg
 1980
 cttctgggcc aagagtactt tttatataac taatttctaa atccaaaagc tcaaggaata
 2040
 gacagtgttc tgtgacatgg attggtttga aggagttacc caccatccca gcacgataat
 2100
 gtcattcccc aagttggatg gcagcacgat ctggccctag ggagcttcct gtccccagaa
 2160
 gtcattgtcc tgggctatcc agatgtccct agtaaactct gcttccttct gcaatgttag
 2220
 taatgcctta agctgacagt tgctattttg cagaacagtt ttcctctttg cttagctagt
 2280
 aacttgccctc tgagcctggg ctgatctgag aaacaggtgt gacaagagca tgaaccagag
 2340
 gtgcacctgg ggcagttccc taataaaact ggtttgtaca gtcatggtgt tggggtgatc
 2400
 agaatggaag cccttttcaa aataaaa
 2427

<210> 5424

<211> 570

<212> PRT

<213> Homo sapiens

<400> 5424

Met	Ala	Ala	Gly	Leu	His	Ser	Asn	Val	Arg	Leu	Leu	Ser	Ser	Leu
1			5					10				15		
Leu	Leu	Thr	Met	Ser	Asn	Asn	Asn	Pro	Glu	Leu	Phe	Ser	Pro	Pro
		20					25				30			Gln
Lys	Tyr	Gln	Leu	Leu	Val	Tyr	His	Ala	Asp	Ser	Leu	Phe	His	Asp
		35				40				45				Lys
Glu	Tyr	Arg	Asn	Ala	Val	Ser	Lys	Tyr	Thr	Met	Ala	Leu	Gln	Gln
	50				55				60					Lys
Lys	Ala	Leu	Ser	Lys	Thr	Ser	Lys	Val	Arg	Pro	Ser	Thr	Gly	Asn
														Ser

65					70					75				80	
Ala	Ser	Thr	Pro	Gln	Ser	Gln	Cys	Leu	Pro	Ser	Glu	Ile	Glu	Val	Lys
				85					90					95	
Tyr	Lys	Met	Ala	Glu	Cys	Tyr	Thr	Met	Leu	Lys	Gln	Asp	Lys	Asp	Ala
			100					105					110		
Ile	Ala	Ile	Leu	Asp	Gly	Ile	Pro	Ser	Arg	Gln	Arg	Thr	Pro	Lys	Ile
		115				120					125				
Asn	Met	Met	Leu	Ala	Asn	Leu	Tyr	Lys	Lys	Ala	Gly	Gln	Glu	Arg	Pro
	130				135						140				
Ser	Val	Thr	Ser	Tyr	Lys	Glu	Val	Leu	Arg	Gln	Cys	Pro	Leu	Ala	Leu
145				150					155						160
Asp	Ala	Ile	Leu	Gly	Leu	Leu	Ser	Leu	Ser	Val	Lys	Gly	Ala	Glu	Val
			165					170						175	
Ala	Ser	Met	Thr	Met	Asn	Val	Ile	Gln	Thr	Val	Pro	Asn	Leu	Asp	Trp
		180						185					190		
Leu	Ser	Val	Trp	Ile	Lys	Ala	Tyr	Ala	Phe	Val	His	Thr	Gly	Asp	Asn
		195				200					205				
Ser	Arg	Ala	Ile	Ser	Thr	Ile	Cys	Ser	Leu	Glu	Lys	Lys	Ser	Leu	Leu
	210				215						220				
Arg	Asp	Asn	Val	Asp	Leu	Gly	Ser	Leu	Ala	Asp	Leu	Tyr	Phe	Arg	
225				230					235					240	
Ala	Gly	Asp	Asn	Lys	Asn	Ser	Val	Leu	Lys	Phe	Glu	Gln	Ala	Gln	Met
			245						250					255	
Leu	Asp	Pro	Tyr	Leu	Ile	Lys	Gly	Met	Asp	Val	Tyr	Gly	Tyr	Leu	Leu
		260					265					270			
Ala	Arg	Glu	Gly	Arg	Leu	Glu	Asp	Val	Glu	Asn	Leu	Gly	Cys	Arg	Leu
	275					280						285			
Phe	Asn	Ile	Ser	Asp	Gln	His	Ala	Glu	Pro	Trp	Val	Val	Ser	Gly	Cys
	290				295						300				
His	Ser	Phe	Tyr	Ser	Lys	Arg	Tyr	Ser	Arg	Ala	Leu	Tyr	Leu	Gly	Ala
305				310						315					320
Lys	Ala	Ile	Gln	Leu	Asn	Ser	Asn	Ser	Val	Gln	Ala	Leu	Leu	Leu	Lys
			325						330					335	
Gly	Ala	Ala	Leu	Arg	Asn	Met	Gly	Arg	Val	Gln	Glu	Ala	Ile	Ile	His
		340					345						350		
Phe	Arg	Glu	Ala	Ile	Arg	Leu	Ala	Pro	Cys	Arg	Leu	Asp	Cys	Tyr	Glu
	355					360						365			
Gly	Leu	Ile	Glu	Cys	Tyr	Leu	Ala	Ser	Asn	Ser	Ile	Arg	Glu	Ala	Met
	370				375						380				
Val	Met	Ala	Asn	Asn	Val	Tyr	Lys	Thr	Leu	Gly	Ala	Asn	Ala	Gln	Thr
385				390						395					400
Leu	Thr	Leu	Leu	Ala	Thr	Val	Cys	Leu	Glu	Asp	Pro	Val	Thr	Gln	Glu
			405						410					415	
Lys	Ala	Lys	Thr	Leu	Leu	Asp	Lys	Ala	Leu	Thr	Gln	Arg	Pro	Asp	Tyr
		420					425						430		
Ile	Lys	Ala	Val	Val	Lys	Lys	Ala	Glu	Leu	Leu	Ser	Arg	Glu	Gln	Lys
	435						440					445			
Tyr	Glu	Asp	Gly	Ile	Ala	Leu	Leu	Arg	Asn	Ala	Leu	Ala	Asn	Gln	Ser
	450					455					460				
Asp	Cys	Val	Leu	His	Arg	Ile	Leu	Gly	Asp	Phe	Leu	Val	Ala	Val	Asn
465				470						475					480
Glu	Tyr	Gln	Glu	Ala	Met	Asp	Gln	Tyr	Ser	Ile	Ala	Leu	Ser	Leu	Asp
			485						490					495	
Pro	Asn	Asp	Gln	Lys	Ser	Leu	Glu	Gly	Met	Gln	Lys	Met	Glu	Lys	Glu

```

<400> 5426
Pro Gln Leu Cys His Gly Leu Val Gly Ser Trp Pro Ala Cys Ser Ala
 1                    5                      10                15
Pro Ser Cys Ala Pro Ala Leu Leu Gly Ser Gly Cys Gly Ser Gly Glu
 20                    25                      30
Ser Cys Asp Arg Gly Cys Leu Ala Ala Ile Leu Ala Ser Thr Ser Ala
 35                    40                      45
Thr Gln Ala Arg Met Cys Pro Val Leu Arg Cys Cys Ser Glu Phe Ile
 50                    55                      60
Glu Ala Xaa Gly Val Val Asp Gly Ile Tyr Arg Leu Ser Gly Val Ser

```

65 70 75 80
Ser Asn Ile Gln Arg Leu Arg His Glu Phe Asp Ser Glu Arg Ile Pro
 85 90 95
Glu Leu

```
<210> 5427
<211> 366
<212> DNA
<213> Homo sapiens
```

```

<400> 5427
tgatcactgt attgcactcc agtctgggca acagagcaag actctgtcat aaacaaacca
60
acaaacaaat caaaaattct tgttgagtac ctgctacatg ctaagtgtc ctctaggtgc
120
tgaggataca tcagagggca aaatggatac agatactctg aaaaaacgtg cattctagct
180
gggattgggt cctccacact gtgtccaaaa ggtatgttg gggtgtgaa gtagataaac
240
tggtattggc agcaggaaca gcatttatgg aacagagggg aagacacatt caaggaatga
300
aacatcgtct ggctggatca tgaaatgcaa ggcagatatg gcacaggagg cagacaaagg
360
gttgaa
366

```

```
<210> 5428
<211> 101
<212> PRT
<213> Homo sapiens
```

```

<400> 5428
Met Phe His Ser Leu Asn Val Ser Ser Pro Leu Phe His Lys Cys Cys
  1                    5                10                15
Ser Cys Cys Gln Tyr Gln Phe Ile Tyr Phe Ser Asn Pro Asn Ile Pro
  20                25                30
Phe Gly His Ser Val Glu Asp Pro Ile Pro Ala Arg Met His Val Phe
  35                40                45
Ser Glu Tyr Leu Tyr Pro Phe Cys Pro Leu Met Tyr Pro Gln His Leu
  50                55                60
Glu Glu His Leu Ala Cys Ser Arg Tyr Ser Thr Arg Ile Phe Asp Leu
  65                70                75                80
Phe Val Gly Leu Phe Met Thr Glu Ser Cys Ser Val Ala Gln Thr Gly
  85                90                95
Val Gln Tyr Ser Asp
  100

```

```
<210> 5429
<211> 612
<212> DNA
<213> Homo sapiens
```

<400> 5429

ccggcgggcg gcaaggctcc gggccagcat gggggcttcg tggtgactgt caagcaagag
 60
 cgcgcgagg gtccacgcgc gggcgagaag ggggtccacg aggaggaggt gagagtcct
 120
 gcgctgagct gggggaggcc ccgggctccc gccccagcct cgaagccccg cccaggtg
 180
 gatttgaatt gcttgtggct ccgcccacag cccattttcc tctggaagct gagacccgc
 240
 cccgtgccag ctgccacgcc cctgacaggt cctctgccac tctaagtcca ggccccgcc
 300
 accgcacaat gccagctctg cccactctaa ggtcccgccc acttccactc cttggggcg
 360
 gcaccctccc cttggtcctg tggggccggt ctccagcaga aaaccacgcc caccaagcag
 420
 aggccacgcc cacaaccgaa gtcaacgcca accctgtact caaacctcgg cccatagttc
 480
 ctcagatccc ctcaccctg gccagggatc cctctaacc accgtgtccc gactgctgac
 540
 cgggccctac ctccatcttt tccgggttct tctcccagc taggccccgc cccatcccc
 600
 gcccatacgc gt
 612

<210> 5430

<211> 94

<212> PRT

<213> Homo sapiens

<400> 5430

Pro	Ala	Gly	Gly	Lys	Ala	Pro	Gly	Gln	His	Gly	Gly	Phe	Val	Val	Thr
1				5				10					15		
Val	Lys	Gln	Glu	Arg	Gly	Glu	Gly	Pro	Arg	Ala	Gly	Glu	Lys	Gly	Ser
		20					25					30			
His	Glu	Glu	Glu	Val	Arg	Val	Pro	Ala	Leu	Ser	Trp	Gly	Arg	Pro	Arg
		35				40					45				
Ala	Pro	Ala	Pro	Ala	Ser	Lys	Pro	Arg	Pro	Arg	Leu	Asp	Leu	Asn	Cys
	50					55					60				
Leu	Trp	Leu	Arg	Pro	Gln	Pro	Ile	Phe	Leu	Trp	Lys	Leu	Arg	Pro	Arg
65				70				75					80		
Pro	Val	Pro	Ala	Ala	Thr	Pro	Leu	Thr	Gly	Pro	Leu	Pro	Leu		
			85					90							

<210> 5431

<211> 3005

<212> DNA

<213> Homo sapiens

<400> 5431

nngcacgatg tcatccagca gctgccccca ccacattaca ggaccctgga gtacctgctg
 60
 aggcacctgg ccgcatggc gagacacagt gccaacacca gcatgcatgc ccgcaacctg
 120
 gccattgtct gggcacccaa cctgctacgg tccatggagc tggagtcagt gggaatgggt
 180

ggcgcgccgg cggtccggga agttcgggtg cagtcggtgg tggaggagtt tctgctcacc
240
catgtggacg tcctgttcag cgacaccttc acctccgccg gcctcgacct tgcaggccgc
300
tgctctctcc ccaggcccaa gtcccttgcg ggcagctgcc cctccacctg cctgctgacg
360
ctggagggaag cccaggcacg caccaggggc cggctgggga cggccacgga gccacaact
420
cccaaggccc cggcctcacc tgcggaaagg aggaaagggg agagagggga gaagcagcgg
480
aagccagggg gcagcagctg gaagacgttc tttgcaactg gccggggccc cagtgtccct
540
cgaaagaagc ccctgccctg gctggggggc acccgtgcc caccgcagcc ttcaggcagc
600
agaccgcaca ccgtcacact gagatctgcc aagagcgagg agtctctgtc atcgaggcc
660
agcggggctg gcctccagag gctgcacagg ctgcggcgac cccactccag cagcgacgt
720
ttcctgtgg gccagcacc tgctggctcc tgcgagagcc tgcctcgtc ctccctctcc
780
gagtcctcct cctctgagtc ctccctctcc tcctctgagt cctcagcagc tgggtgggg
840
gcactctctg ggtctccctc acaccgtacc tcagcctggc tagatgatgg tgatgagctg
900
gacttcagcc caccgcgctg cctggaggga ctccgggggc tggactttga tcccttaacc
960
ttccgctgca gcagcccccac cccaggggat ccgcacctc ccgccagccc agcaccccc
1020
gcccctgcct ctgccttccc acccaggggtg acccccagg ccctctcgcc ccggggggcc
1080
accagccccg cctcgctctg tgccttagac atctcagagc ccctggctgt atcagtgcc
1140
ccgctgtcc tagaactgct gggggctggg ggagcacctg cctcagccac cccaacacca
1200
gctctcagcc ccggccggag cctgcgcccc catctcatac ccctgctgct gcgaggagcc
1260
gaggccccgc tgactgacgc ctgccagcag gagatgtgca gcaagctccg gggagcccag
1320
ggcccaactc gtctgatata ggagtcacca ctgccacccc ctccctgtc tctctgcgc
1380
cctgggggtg cccaccccc gcccctaag aaccagcac gcctcatggc cctggccctg
1440
gctgagcggg ctgagcaggt ggccagcaa cagagccagc aggagtgtgg gggcacccca
1500
cctgcttccc aatccccctt ccaccgctcg ctgtctctgg aggtgggcgg ggagcccctg
1560
gggacctcag ggagtggggc acctcccaac tccttagcac acccgggtgc ctgggtcccc
1620
ggacccccac cctacttacc aaggcaacaa agtgatggga gcctgctgag gagccagcgg
1680
cccatgggga cctcaaggag gggactccga ggccctgcc aggtcagtgc gcagctcagg
1740
gcaggtggcg ggggcaggga tgcgccagag gcagcagccc agtcccatg ttctgtcccc
1800

tcacagggttc ctacccccgg cttcttctcc ccagccccca gggagtgcct gccacccttc
 1860
 ctcggggtcc ccaagccagg cttgtacccc ctggggcccc catccttcca gccagttcc
 1920
 ccagccccag tctggaggag ctctctgggc cccctgcac cactcgacag gggagagaac
 1980
 ctgtactatg agatcggggc aagtgagggg tccccctatt ctggccccac ccgctcctgg
 2040
 agtccctttc gctccatgcc ccccgacagg ctcaatgcct cctacggcat gcttggccaa
 2100
 tcacccccac tccacaggtc ccccgacttc ctgctcagct acccgccagc cccctcctgc
 2160
 tttccccctg accaccttgg ctactcagcc ccccgacc ctgctcggcg ccctacaccg
 2220
 cctgagcccc tctacgtcaa cctagctcta gggcccaggg gtccctcacc tgctcttcc
 2280
 tctctctctt cccctcctgc ccacccccga agccgttcag atcccggtcc cccagtcccc
 2340
 cgccttcccc agaaacaacg ggcaccctgg ggaccccgta cccctcatag ggtgccgggt
 2400
 ccctggggcc ctctgagcc tctctgctc tacagggcag ccccgccagc ctacggaagg
 2460
 gggggcgagc tccaccgagg gtccttgtac agaaatggag ggcaaagagg ggaggggggt
 2520
 ggtccccac ccccttacc cactcccagc tgggtccctcc actctgaggg ccagaccga
 2580
 agctactgct gagcaccagc tgggaggggc cgtccttctt tcccttcacc ctactggat
 2640
 cttggcccaa ccaaaccct tgttttgtat tttcttgaac cccgaccact accccaggtt
 2700
 tctaactttg taacttgctt ctgatgtggg tccctaacct ataatctcag cttccctacc
 2760
 ctggactgaa gggctctgcc atccccccac caccctccat cctggggggc ctgcacaaa
 2820
 tctgggtgg gaggggctag gctgacccca tctctctct cctccaggag ccccagcat
 2880
 gtctctacct gtgcacgggg atggggggac aactcctacc cttctttccc cacatgcccc
 2940
 actaaacat ctgacaacat taatgaataa aatggtgaaa atgtgaaaaa aaaaaaaaaa
 3000
 aaaaa
 3005

<210> 5432

<211> 863

<212> PRT

<213> Homo sapiens

<400> 5432

Xaa His Asp Val Ile Gln Gln Leu Pro Pro Pro His Tyr Arg Thr Leu
 1 5 10 15
 Glu Tyr Leu Leu Arg His Leu Ala Arg Met Ala Arg His Ser Ala Asn
 20 25 30
 Thr Ser Met His Ala Arg Asn Leu Ala Ile Val Trp Ala Pro Asn Leu

```

      35      40      45
Leu Arg Ser Met Glu Leu Glu Ser Val Gly Met Gly Gly Ala Ala Ala
  50      55      60
Phe Arg Glu Val Arg Val Gln Ser Val Val Val Glu Phe Leu Leu Thr
  65      70      75      80
His Val Asp Val Leu Phe Ser Asp Thr Phe Thr Ser Ala Gly Leu Asp
      85      90      95
Pro Ala Gly Arg Cys Leu Leu Pro Arg Pro Lys Ser Leu Ala Gly Ser
      100      105      110
Cys Pro Ser Thr Arg Leu Leu Thr Leu Glu Glu Ala Gln Ala Arg Thr
      115      120      125
Gln Gly Arg Leu Gly Thr Pro Thr Glu Pro Thr Thr Pro Lys Ala Pro
      130      135      140
Ala Ser Pro Ala Glu Arg Lys Gly Glu Arg Gly Glu Lys Gln Arg
  145      150      155      160
Lys Pro Gly Gly Ser Ser Trp Lys Thr Phe Phe Ala Leu Gly Arg Gly
      165      170      175
Pro Ser Val Pro Arg Lys Lys Pro Leu Pro Trp Leu Gly Gly Thr Arg
      180      185      190
Ala Pro Pro Gln Pro Ser Gly Ser Arg Pro Asp Thr Val Thr Leu Arg
      195      200      205
Ser Ala Lys Ser Glu Glu Ser Leu Ser Ser Gln Ala Ser Gly Ala Gly
      210      215      220
Leu Gln Arg Leu His Arg Leu Arg Arg Pro His Ser Ser Ser Asp Ala
  225      230      235      240
Phe Pro Val Gly Pro Ala Pro Ala Gly Ser Cys Glu Ser Leu Ser Ser
      245      250      255
Ser Ser Ser Ser Glu Ser Ser Ser Ser Glu Ser Ser Ser Ser Ser
      260      265      270
Glu Ser Ser Ala Ala Gly Leu Gly Ala Leu Ser Gly Ser Pro Ser His
      275      280      285
Arg Thr Ser Ala Trp Leu Asp Asp Gly Asp Glu Leu Asp Phe Ser Pro
      290      295      300
Pro Arg Cys Leu Glu Gly Leu Arg Gly Leu Asp Phe Asp Pro Leu Thr
  305      310      315      320
Phe Arg Cys Ser Ser Pro Thr Pro Gly Asp Pro Ala Pro Pro Ala Ser
      325      330      335
Pro Ala Pro Pro Ala Pro Ala Ser Ala Phe Pro Pro Arg Val Thr Pro
      340      345      350
Gln Ala Ile Ser Pro Arg Gly Pro Thr Ser Pro Ala Ser Pro Ala Ala
      355      360      365
Leu Asp Ile Ser Glu Pro Leu Ala Val Ser Val Pro Pro Ala Val Leu
  370      375      380
Glu Leu Leu Gly Ala Gly Gly Ala Pro Ala Ser Ala Thr Pro Thr Pro
  385      390      395      400
Ala Leu Ser Pro Gly Arg Ser Leu Arg Pro His Leu Ile Pro Leu Leu
      405      410      415
Leu Arg Gly Ala Glu Ala Pro Leu Thr Asp Ala Cys Gln Gln Glu Met
      420      425      430
Cys Ser Lys Leu Arg Gly Ala Gln Gly Pro Leu Gly Pro Asp Met Glu
      435      440      445
Ser Pro Leu Pro Pro Pro Pro Leu Ser Leu Leu Arg Pro Gly Gly Ala
      450      455      460
Pro Pro Pro Pro Pro Lys Asn Pro Ala Arg Leu Met Ala Leu Ala Leu

```

```

465          470          475          480
Ala Glu Arg Ala Gln Val Ala Glu Gln Gln Ser Gln Gln Glu Cys
          485          490          495
Gly Gly Thr Pro Ala Ser Gln Ser Pro Phe His Arg Ser Leu Ser
          500          505          510
Leu Glu Val Gly Gly Glu Pro Leu Gly Thr Ser Gly Ser Gly Pro Pro
          515          520          525
Pro Asn Ser Leu Ala His Pro Gly Ala Trp Val Pro Gly Pro Pro Pro
          530          535          540
Tyr Leu Pro Arg Gln Gln Ser Asp Gly Ser Leu Leu Arg Ser Gln Arg
545          550          555          560
Pro Met Gly Thr Ser Arg Arg Gly Leu Arg Gly Pro Ala Gln Val Ser
          565          570          575
Ala Gln Leu Arg Ala Gly Gly Gly Gly Arg Asp Ala Pro Glu Ala Ala
          580          585          590
Ala Gln Ser Pro Cys Ser Val Pro Ser Gln Val Pro Thr Pro Gly Phe
          595          600          605
Phe Ser Pro Ala Pro Arg Glu Cys Leu Pro Pro Phe Leu Gly Val Pro
610          615          620
Lys Pro Gly Leu Tyr Pro Leu Gly Pro Pro Ser Phe Gln Pro Ser Ser
625          630          635          640
Pro Ala Pro Val Trp Arg Ser Ser Leu Gly Pro Pro Ala Pro Leu Asp
          645          650          655
Arg Gly Glu Asn Leu Tyr Tyr Glu Ile Gly Ala Ser Glu Gly Ser Pro
          660          665          670
Tyr Ser Gly Pro Thr Arg Ser Trp Ser Pro Phe Arg Ser Met Pro Pro
          675          680          685
Asp Arg Leu Asn Ala Ser Tyr Gly Met Leu Gly Gln Ser Pro Pro Leu
690          695          700
His Arg Ser Pro Asp Phe Leu Leu Ser Tyr Pro Pro Ala Pro Ser Cys
705          710          715          720
Phe Pro Pro Asp His Leu Gly Tyr Ser Ala Pro Gln His Pro Ala Arg
          725          730          735
Arg Pro Thr Pro Pro Glu Pro Leu Tyr Val Asn Leu Ala Leu Gly Pro
          740          745          750
Arg Gly Pro Ser Pro Ala Ser Ser Ser Ser Ser Pro Pro Ala His
          755          760          765
Pro Arg Ser Arg Ser Asp Pro Gly Pro Pro Val Pro Arg Leu Pro Gln
770          775          780
Lys Gln Arg Ala Pro Trp Gly Pro Arg Thr Pro His Arg Val Pro Gly
785          790          795          800
Pro Trp Gly Pro Pro Glu Pro Leu Leu Leu Tyr Arg Ala Ala Pro Pro
          805          810          815
Ala Tyr Gly Arg Gly Gly Glu Leu His Arg Gly Ser Leu Tyr Arg Asn
          820          825          830
Gly Gly Gln Arg Gly Glu Gly Ala Gly Pro Pro Pro Pro Tyr Pro Thr
          835          840          845
Pro Ser Trp Ser Leu His Ser Glu Gly Gln Thr Arg Ser Tyr Cys
850          855          860

```

<210> 5433

<211> 385

<212> DNA

<213> Homo sapiens

<400> 5433

gatctaacca acctccacta ctcgacaccc ctgccagcct ccctggacac caccgaccac
 60
 cactttggca gtatgagtgt ggggaatagt gtgaacaaca tcccagctgc tatgacccac
 120
 ctgggtataa gaagctcttc tgggtctccag agttctcgga gtaacccttc catccaagcc
 180
 acgctcaata agactgtgct ttcctcttcc ttaaataacc acccacagac atctgttccc
 240
 aacgcatctg ctcttcaccc ttcgctccgt ctgttttccc ttagcaaccc atctctttcc
 300
 accacaaacc tgagcggccc gtctcggcgt cggcagcctc ccgtcagccc tctcacgctt
 360
 tctcctggcc ctgaagcaca tcaag
 385

<210> 5434

<211> 128

<212> PRT

<213> Homo sapiens

<400> 5434

Asp	Leu	Thr	Asn	Leu	His	Tyr	Ser	Thr	Pro	Leu	Pro	Ala	Ser	Leu	Asp
1			5					10					15		
Thr	Thr	Asp	His	His	Phe	Gly	Ser	Met	Ser	Val	Gly	Asn	Ser	Val	Asn
		20					25					30			
Asn	Ile	Pro	Ala	Ala	Met	Thr	His	Leu	Gly	Ile	Arg	Ser	Ser	Ser	Gly
	35					40					45				
Leu	Gln	Ser	Ser	Arg	Ser	Asn	Pro	Ser	Ile	Gln	Ala	Thr	Leu	Asn	Lys
	50				55					60					
Thr	Val	Leu	Ser	Ser	Ser	Leu	Asn	Asn	His	Pro	Gln	Thr	Ser	Val	Pro
65				70					75					80	
Asn	Ala	Ser	Ala	Leu	His	Pro	Ser	Leu	Arg	Leu	Phe	Ser	Leu	Ser	Asn
			85					90					95		
Pro	Ser	Leu	Ser	Thr	Thr	Asn	Leu	Ser	Gly	Pro	Ser	Arg	Arg	Arg	Gln
		100					105					110			
Pro	Pro	Val	Ser	Pro	Leu	Thr	Leu	Ser	Pro	Gly	Pro	Glu	Ala	His	Gln
		115					120					125			

<210> 5435

<211> 617

<212> DNA

<213> Homo sapiens

<400> 5435

ctcacacctg taatcacagc actttgggag gctgaggtgt gagccactgc tcctggcttg
 60
 aaacagataa ttctttatat tcaacctgtt gtcaaaatTT ttagaaacat tttcccagtt
 120
 ccttgataa gtatactttg tataacttct ggcaaaccat aattatgaac tcacattact
 180
 atagtactat aatactgcag aaagggatct tgcgtttcag aaatgtcact catccagttt
 240

tcttccccctt tctctaacc cctctccctc ccaggctcat gggtttctgtt gcaatcctct
 300
 ttctcccttac acaaggcaag aagttttctt accaatagat cagacctgtg aaggactgcc
 360
 cgacatgac tgatatgggtt gttcttcatt ttgggctgta gtattttaaa gtagaggttt
 420
 gctctgatgg tcccatcaact gcttgccatt gtctttccct ttgctctagc tatcagggga
 480
 tggtgcttta agtttggtcc ccaggcttta ctgccaagag ggaaattcat acccacttta
 540
 acaagggtgtg aagcttatct tacagttgct aatgcctcac tgaccttttg gaaaggctcat
 600
 agttaccctt cacgcgt
 617

<210> 5436

<211> 119

<212> PRT

<213> Homo sapiens

<400> 5436

Met	Asn	Phe	Pro	Leu	Gly	Ser	Lys	Ala	Trp	Gly	Thr	Asn	Leu	Lys	Gln
1				5					10					15	
His	Pro	Leu	Ile	Ala	Arg	Ala	Lys	Gly	Lys	Thr	Met	Ala	Ser	Ser	Asp
			20					25					30		
Gly	Thr	Ile	Arg	Ala	Asn	Leu	Tyr	Phe	Lys	Ile	Leu	Gln	Pro	Lys	Met
		35					40				45				
Lys	Asn	Asn	His	Ile	Arg	Ser	Cys	Arg	Ala	Val	Leu	His	Arg	Ser	Asp
	50					55				60					
Leu	Leu	Val	Arg	Lys	Leu	Leu	Ala	Leu	Cys	Lys	Glu	Lys	Glu	Asp	Cys
65					70				75					80	
Asn	Arg	Asn	His	Glu	Pro	Gly	Arg	Glu	Met	Gly	Leu	Glu	Lys	Gly	Glu
			85					90					95		
Glu	Asn	Trp	Met	Ser	Asp	Ile	Ser	Glu	Thr	Gln	Asp	Pro	Phe	Leu	Gln
			100					105					110		
Tyr	Tyr	Ser	Thr	Ile	Val	Met									
						115									

<210> 5437

<211> 1422

<212> DNA

<213> Homo sapiens

<400> 5437

ttccgcgggtg gaggggtgct atactgggat gcaggcgagg cggggactgg cagcaatcat
 60
 gccctgggag ctaacgtaga gctttggata atgcttttgc aagttgtacg agaagggaag
 120
 ttctcgggggt ttctgacctc ctgcagcctc ctcttgccctc gggctgcccc gatcttgagg
 180
 gctgaggctg gcttaccttc gagccgttcc ttcattgggat ttgctgctcc cttaccaaac
 240
 aagcgaaagg cttactcgga gcgtagaatc atgggggtact caatgcagga gatgtatgag
 300

gtggtgtcca acgtccagga gtatcgtgag tttgtgccct ggtgtaagaa gtctctgggtg
 360
 gtatccagcc gtaaggggtca tttgaaagcc cagctggagg ttggctttcc acctgtcatg
 420
 gaacgttaca cctctgcagt ttccatgggtc aaacctcaca tggtaaggc tgtttgtact
 480
 gatggcaagc tcttcaacca cttagagact atttggcgat tcagccctgg tattcctgcc
 540
 tatectcgaa cctgcactgt ggacttttctg atttcctttg aatttcgttc tctgctgcac
 600
 tcccagctgg ccaccatgtt ttttgatgag gttgtcaaac agaattgttc tgcctttgag
 660
 cgtcgggcag ccaccaagtt tgggtccagaa acagccatcc cccgtgaact gatgttccat
 720
 gaggtgcacc agacttgagg caagggattg ctccctgacc tcccttctac cccacttccc
 780
 tacacaattc tcttatttat ttggtttggc tcctgttcca atttgaaagg agtctgtgtt
 840
 cataatactg tttctctctt caatttccca gaaattgggt tctatgctgg ctggaaatgt
 900
 tgggggaaag agaaggcaaa ggatgtggaa atgagatgtg cttaggaaag ggtcaggccc
 960
 atcgtaggag caccatatgc ctgcagcctt ttcactacga attagaataa ggactatgtg
 1020
 gttgtctctg gaccttatca agacacctta gtgtctgacc aggggacgat agtaactttt
 1080
 ctaaggattg aataaattga gcttttcttc tggcacagag gtactgagtg gtaagtaact
 1140
 tttaccctgc ctgagattcc tcaggagaaa aggcaacctg cctccagcct gaaatacata
 1200
 aagcctcatt ttaagactgt aagtccatgc tgcctggcta ctagagagca aggggctttc
 1260
 ttaccaccag tgctgaggag aaaagtactg aacggaaacg gagttgtctt tgtactcttg
 1320
 agttgtacct tattcttcca cttggcctga gtttttataa aatttcaata aattgtgaca
 1380
 gtgtgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1422

<210> 5438

<211> 245

<212> PRT

<213> Homo sapiens

<400> 5438

Phe	Arg	Gly	Gly	Val	Leu	Tyr	Trp	Asp	Ala	Gly	Ala	Ala	Gly	Thr
1			5				10				15			
Gly	Ser	Asn	His	Ala	Leu	Gly	Ala	Asn	Val	Glu	Leu	Trp	Ile	Met
		20					25				30			
Leu	Gln	Val	Val	Arg	Glu	Gly	Lys	Phe	Ser	Gly	Phe	Leu	Thr	Ser
		35					40				45			
Ser	Leu	Leu	Leu	Pro	Arg	Ala	Ala	Gln	Ile	Leu	Ala	Ala	Glu	Ala
		50					55				60			
Leu	Pro	Ser	Ser	Arg	Ser	Phe	Met	Gly	Phe	Ala	Ala	Pro	Phe	Thr
														Asn

65					70					75				80	
Lys	Arg	Lys	Ala	Tyr	Ser	Glu	Arg	Arg	Ile	Met	Gly	Tyr	Ser	Met	Gln
				85					90					95	
Glu	Met	Tyr	Glu	Val	Val	Ser	Asn	Val	Gln	Glu	Tyr	Arg	Glu	Phe	Val
			100					105					110		
Pro	Trp	Cys	Lys	Lys	Ser	Leu	Val	Val	Ser	Ser	Arg	Lys	Gly	His	Leu
		115					120					125			
Lys	Ala	Gln	Leu	Glu	Val	Gly	Phe	Pro	Pro	Val	Met	Glu	Arg	Tyr	Thr
	130					135					140				
Ser	Ala	Val	Ser	Met	Val	Lys	Pro	His	Met	Val	Lys	Ala	Val	Cys	Thr
145					150					155				160	
Asp	Gly	Lys	Leu	Phe	Asn	His	Leu	Glu	Thr	Ile	Trp	Arg	Phe	Ser	Pro
			165					170						175	
Gly	Ile	Pro	Ala	Tyr	Pro	Arg	Thr	Cys	Thr	Val	Asp	Phe	Ser	Ile	Ser
		180						185					190		
Phe	Glu	Phe	Arg	Ser	Leu	Leu	His	Ser	Gln	Leu	Ala	Thr	Met	Phe	Phe
		195					200					205			
Asp	Glu	Val	Val	Lys	Gln	Asn	Val	Ala	Ala	Phe	Glu	Arg	Arg	Ala	Ala
	210					215					220				
Thr	Lys	Phe	Gly	Pro	Glu	Thr	Ala	Ile	Pro	Arg	Glu	Leu	Met	Phe	His
225					230					235				240	
Glu	Val	His	Gln	Thr											
				245											

<210> 5439

<211> 4234

<212> DNA

<213> Homo sapiens

<400> 5439

ggaggttctt cactcgcgac tgacggagct gcggtggcgt ctccacacgc aaccatgaag
 60
 ttgaaggaca caaaatcaag gccaaagcag tcaagctgtg gcaaatttca gacaaagggg
 120
 atcaaagtgt tgggaaaatg gaaggaagtg aagattgacc caaatatgtt tgcagatgga
 180
 cagatggatg acttggtgtg ctttgaggaa ttgacagatt accagttggt ctcccctgcc
 240
 aagaatccct ccagtctctt ctcaaaggaa gcacccaaga gaaaggcaca agctgtttca
 300
 gaagaagagg aggaggagga gggaaagtct agctcaccaa agaaaaagat caagttgaag
 360
 aaaagtaaaa atgtagcaac tgaaggaacc agtaccaga aagaatttga agtgaaagat
 420
 cctgagctgg aggcccagg agatgacatg gtttgtgatg atccggaggc tggggagatg
 480
 acatcagaaa acctggtcca aactgctcca aaaaagaaga aaaataaagg gaaaaaaggg
 540
 ttggagcctt ctcaagcac tgctgccaag gtgcccaaaa aagcgaagac atggattcct
 600
 gaagttcatg atcagaaagc agatgtgtca gcttgggaagg acctgtttgt tcccaggccg
 660
 gttctccgag cactcagctt tctaggcttc tctgcacca caccaatcca agccctgacc
 720

ttggcacctg ccatccgtga caaactggac atccttgggg ctgctgagac aggaagtggg
780
aaaactcttg cctttgccat cccaatgatt catgcggtgt tgcaagtggca gaagaggaat
840
gctgcccctc ctccaagtaa caccgaagca ccacctggag agaccagaac tgaggccgga
900
gctgagacta gatcaccagg caaggctgaa gctgagtctg atgcattgcc tgacgatact
960
gtaattgaga gtgaagcact gccagtgat attgcagccg aggccagagc caagactgga
1020
ggcactgtct cagaccaggc gttgctcttt ggtgacgatg atgctggtga agggccttct
1080
tccctgatca gggagaaacc tgttcccaaa cagaatgaga atgaggagga aaatcttgat
1140
aaagagcaga ctggaaatct aaaacaggag ttggatgaca aaagcgccac ctgtaaggca
1200
tatccaaagc gtcctctgct tggactgggt ctgactccca ctcgagagct ggccgtccag
1260
gtcaaacagc acattgatgc tgtggccagg tttacaggaa ttaaaactgc tattttggtt
1320
ggtggaatgt ccacgcagaa acagcagagg atgctgaacc gtcgtcctga gattgtgggt
1380
gctactccag gccggctgtg ggaattaatt aaagaaaagc attatcattt gaggaacctt
1440
cggcagctca ggtgcctggt agtggatgag gctgaccgga tggttgagaa aggccatttt
1500
gctgagctct cacagctgct agagatgctc aatgactccc aatacaaccc aaagagacaa
1560
acgcttgttt tttctgccac actcaccctg gtgcatcagg ctctgtctcg aatccttcat
1620
aagaagcaca ccaagaaaat ggataaaaca gccaaacttg acctccttat gcagaaaatt
1680
ggcatgaggg gcaagcccaa ggtcattgac ctcacaagga atgaggccac ggtggagacg
1740
ctaacagaga ccaagatcca ttgtgagact gatgagaaag acttctactt gtactacttc
1800
ctgatgcagt atccaggccg cagcttagtg tttgccaaca gtatctcttg catcaaacgc
1860
ctctctgggc tcctcaaagt ccttgatata atgcccttga ccctgcatgc ctgtatgcac
1920
cagaagcaga ggctcagaaa cctggagcag tttgcccgtc tgggaagactg tgttctcttg
1980
gcaacagatg tggcggtctg gggctctggat attcctaaag tccagcatgt catccattac
2040
caggtcccac gtacctcgga gatttatgtc caccgaagtg gtcgaactgc tcgagctacc
2100
aatgaaggcc tcagtctgat gctcattggg cctgaggatg tgatcaactt taagaagatt
2160
tacaaaacgc tcaagaaaga tgaggatata ccactgttcc ccgtgcagac aaaatacatg
2220
gatgtggtca aggagcgaat ccgtttagct cgacagattg agaaatctga gtatcggaac
2280
ttccaggctt gcctgcacaa ctcttgatt gagcaggcag cagctgccct ggagattgag
2340

ctggaagaag acatgtataa gggaggaaaa gctgaccagc aagaagaacg tcggagacaa
2400
aagcagatga aggttctgaa gaaggagctg cgccacctgc tgtcccagcc actgtttacg
2460
gagagccaga aaaccaagta tcccactcag tctggcaagc cgcccctgct tgtgtctgcc
2520
ccaagtaaga gcgagtctgc tttgagctgt ctctccaagc agaagaagaa gaagacaaag
2580
aagccgaagg agccacagcc ggaacagcca cagccaagta caagtgcaaa ttaactgccc
2640
tggtcaagtg tgtcagtgc tgacattgg tttctgttct ctggctatct gcaaaacctc
2700
tcccacctt gtgtttcact ccaccaccaa ccccaggtaa aaaagtctcc ctctcttcca
2760
ctcacacca tagcgggaga gacctcatgc agatttgcct tgttttgag taagaattca
2820
atgcagcagc ttaatttttc tgtattgcag tgtttatagg cttcttgtgt gttaaacttg
2880
atttcataaa ttaaaaacaa tggtcagaaa aaaaaaaaa accggaaccg gcggcaccag
2940
ctcggagaga aatcgatgtt gtagtgacct tcagtaaaag agcggttttt catagaggtg
3000
ccgtttttaga ctacctatct aagaggcacg aaaaacaaat acatctaata ggttaagtaa
3060
aaaaccatct atttcggaca ataaaagtta tttctacac acgttggctc tcattttact
3120
cgttaacagt atcacatc cttctaagct tatctttttg acgtgaaagt gtagtagtat
3180
gtctccacct ggcagctatg tagttaatat tttgtctgt tgtaatgtta tcaagtaccg
3240
aacattttcc taatgaaata gtggaaaaga caacctttt ctccatttct atttggattt
3300
ttagatcacg tacataacaa ggaatcgaat aaataatgaa gtgttttata aagagtatcc
3360
gtcttggagg gagattccag ttgggagggt ccataggcag ttcttaccaa gaagatgtcg
3420
attccattct ccaacacca ctaccgaatt ccacaaggat ttgggaatct tcttgaaggg
3480
ctgacacgag agattctgag agagcaaccg gacaatatac cagcttttgc agcagcctat
3540
tttgagagcc ttctagagaa aagagagaaa accaactttg atccagcaga atgggggagt
3600
aaggtagaag accgcttcta taacaatcat gcattcgagg agcaagaacc acctgagaaa
3660
agtgatccta aacaagaaga gtctcagata tctgggaagg aggaagagac atcagtcacc
3720
atcttagact cttctgagga agataaggaa aaagaagagg ttgctgctgt caaaatccaa
3780
gctgccttcc ggggacacat agccagagag gaggcaaaga aaatgaaaac aaatagtctt
3840
caaatgagg aaaaagagga aaacaagtga ggacactggt ttacctcca ggaaacatga
3900
aaaataatcc aaatccatca accttcttat taatgtcatt tctccttgag gaaggaagat
3960

ttgatgttgt gaaataacat tcgttactgt tgtgaaaatc tgtcatgagc atttgtttaa
 4020
 taagcatacc attgaaacat gccacttgaa gatttctctg agatcatgag tttgtttaca
 4080
 cttgtctcaa gcctatctat agagaccctt ggatttagaa ttatagaact aaagtatctg
 4140
 agattacaga gatctcagag gttatgtgtt ctaactatta tcaaatgaat aaatcctctc
 4200
 tatcacatcc cccaaaaaaaa aaaaaaaaaa aaaa
 4234

<210> 5440

<211> 461

<212> PRT

<213> Homo sapiens

<400> 5440

Leu Ala Val Gln Val Lys Gln His Ile Asp Ala Val Ala Arg Phe Thr
 1 5 10 15
 Gly Ile Lys Thr Ala Ile Leu Val Gly Gly Met Ser Thr Gln Lys Gln
 20 25 30
 Gln Arg Met Leu Asn Arg Arg Pro Glu Ile Val Val Ala Thr Pro Gly
 35 40 45
 Arg Leu Trp Glu Leu Ile Lys Glu Lys His Tyr His Leu Arg Asn Leu
 50 55 60
 Arg Gln Leu Arg Cys Leu Val Val Asp Glu Ala Asp Arg Met Val Glu
 65 70 75 80
 Lys Gly His Phe Ala Glu Leu Ser Gln Leu Leu Glu Met Leu Asn Asp
 85 90 95
 Ser Gln Tyr Asn Pro Lys Arg Gln Thr Leu Val Phe Ser Ala Thr Leu
 100 105 110
 Thr Leu Val His Gln Ala Pro Ala Arg Ile Leu His Lys Lys His Thr
 115 120 125
 Lys Lys Met Asp Lys Thr Ala Lys Leu Asp Leu Leu Met Gln Lys Ile
 130 135 140
 Gly Met Arg Gly Lys Pro Lys Val Ile Asp Leu Thr Arg Asn Glu Ala
 145 150 155 160
 Thr Val Glu Thr Leu Thr Glu Thr Lys Ile His Cys Glu Thr Asp Glu
 165 170 175
 Lys Asp Phe Tyr Leu Tyr Tyr Phe Leu Met Gln Tyr Pro Gly Arg Ser
 180 185 190
 Leu Val Phe Ala Asn Ser Ile Ser Cys Ile Lys Arg Leu Ser Gly Leu
 195 200 205
 Leu Lys Val Leu Asp Ile Met Pro Leu Thr Leu His Ala Cys Met His
 210 215 220
 Gln Lys Gln Arg Leu Arg Asn Leu Glu Gln Phe Ala Arg Leu Glu Asp
 225 230 235 240
 Cys Val Leu Leu Ala Thr Asp Val Ala Ala Arg Gly Leu Asp Ile Pro
 245 250 255
 Lys Val Gln His Val Ile His Tyr Gln Val Pro Arg Thr Ser Glu Ile
 260 265 270
 Tyr Val His Arg Ser Gly Arg Thr Ala Arg Ala Thr Asn Glu Gly Leu
 275 280 285
 Ser Leu Met Leu Ile Gly Pro Glu Asp Val Ile Asn Phe Lys Lys Ile

```

      290              295              300
Tyr Lys Thr Leu Lys Lys Asp Glu Asp Ile Pro Leu Phe Pro Val Gln
305              310              315              320
Thr Lys Tyr Met Asp Val Val Lys Glu Arg Ile Arg Leu Ala Arg Gln
      325              330              335
Ile Glu Lys Ser Glu Tyr Arg Asn Phe Gln Ala Cys Leu His Asn Ser
      340              345              350
Trp Ile Glu Gln Ala Ala Ala Ala Leu Glu Ile Glu Leu Glu Glu Asp
      355              360              365
Met Tyr Lys Gly Gly Lys Ala Asp Gln Gln Glu Glu Arg Arg Arg Gln
      370              375              380
Lys Gln Met Lys Val Leu Lys Lys Glu Leu Arg His Leu Leu Ser Gln
385              390              395              400
Pro Leu Phe Thr Glu Ser Gln Lys Thr Lys Tyr Pro Thr Gln Ser Gly
      405              410              415
Lys Pro Pro Leu Leu Val Ser Ala Pro Ser Lys Ser Glu Ser Ala Leu
      420              425              430
Ser Cys Leu Ser Lys Gln Lys Lys Lys Lys Thr Lys Lys Pro Lys Glu
      435              440              445
Pro Gln Pro Glu Gln Pro Gln Pro Ser Thr Ser Ala Asn
      450              455              460

```

<210> 5441

<211> 1635

<212> DNA

<213> Homo sapiens

<400> 5441

```

ncagacacac tgtgacggct gcctgaagct agtgagtcgc ggcgccgcgc actggtgggt
60
gggtcagtgc cgcgcgccga tcggtcggtta ccgcgaggcg ctggtggcct tcaggctgga
120
cggcgcggggt cagccctggt tcgccggctt ctgggtcttt gaacagccgc gatgtcgatc
180
ttcaccccca ccaaccagat ccgcctaacc aatgtggccg tggtagcgat gaagcgtgcc
240
gggaagcgct tcgaaatcgc ctgctacaaa aacaaggctc tgggtggcg gagcggcgtg
300
gaaaaagacc tcgatgaagt tctgcagacc cactcagtgt ttgtaaatgt ttctaaaggt
360
caggttgcca aaaaggaaga tctcatcagt gcgtttggaa cagatgacca aactgaaatc
420
tgtaagcaga ttttgactaa aggagaagtt caagtatcag ataaagaaag acacacacaa
480
ctggagcaga tgtttaggga cattgcaact attgtggcag acaaattgtg gaatcctgaa
540
acaaagagac catacacctg gatccttatt gagagagcca tgaaggacat ccactattcg
600
gtgaaaacca acaagagtac aaaacagcag gctttggaag tgataaagca gttaaaagag
660
aaaatgaaga tagaacgtgc tcacatgagg cttcggttca tccttcagat gaatgaaggc
720
aagaagctga aagaaaagct caagccactg atcaaggctc tagaaagtga agattatggc
780

```

caacagttag aaatcgtatg tctgattgac ccgggctgct tccgagaaat tgatgagcta
 840
 ataaaaaagg aaactaaagg caaagggttct ttggaagtac tcaatctgaa agatgtagaa
 900
 gaaggagatg agaaatttga atgacaccca tcaatctctt cacctctaaa aactaaagt
 960
 gtttccgttt ccgacggcac tgtttcatgt ctgtggtctg ccaaatactt gcttaaaacta
 1020
 tttgacattt tctatctttg tgtaaacagt ggacacagca aggctttcct acataagtat
 1080
 aataatgtgg gaatgatttg gttttaatta taaactgggg tctaaatcct aaagcaaaat
 1140
 tgaaactcca agatgcaaag tccagagtgg cattttgcta ctctgtctca tgccttgata
 1200
 gctttccaaa atgaaagtta cttgaggcag ctcttgtggg tgaaaagtta tttgtacagt
 1260
 agagtaagat tattaggggt atgtctatac aacaaaaggg ggggtctttc ctaaaaaaga
 1320
 aaacatatga tgcttcattt ctacttaatg gaacttgtgt tctgagggtc attatggtat
 1380
 cgtaatatata agcttggatg atgttcctga ttatctgaga aacagatata gaaaaattgt
 1440
 gtcggactta aataattttc gttgaacatg ctgccataac ttagattatt cttgggttaaa
 1500
 aaataaaaagt cacttatttc taattcttaa agtttataat atatattaat atagctaaaa
 1560
 ttgtatgtaa tcaataaaac cactcttatg tttattaaac tatggcttgt gtttctagac
 1620
 aaaaaaaaaa aaaaa
 1635

<210> 5442

<211> 250

<212> PRT

<213> Homo sapiens

<400> 5442

Met	Ser	Ile	Phe	Thr	Pro	Thr	Asn	Gln	Ile	Arg	Leu	Thr	Asn	Val	Ala
1				5					10					15	
Val	Val	Arg	Met	Lys	Arg	Ala	Gly	Lys	Arg	Phe	Glu	Ile	Ala	Cys	Tyr
		20						25					30		
Lys	Asn	Lys	Val	Val	Gly	Trp	Arg	Ser	Gly	Val	Glu	Lys	Asp	Leu	Asp
		35				40						45			
Glu	Val	Leu	Gln	Thr	His	Ser	Val	Phe	Val	Asn	Val	Ser	Lys	Gly	Gln
		50				55					60				
Val	Ala	Lys	Lys	Glu	Asp	Leu	Ile	Ser	Ala	Phe	Gly	Thr	Asp	Asp	Gln
65					70					75				80	
Thr	Glu	Ile	Cys	Lys	Gln	Ile	Leu	Thr	Lys	Gly	Glu	Val	Gln	Val	Ser
			85					90					95		
Asp	Lys	Glu	Arg	His	Thr	Gln	Leu	Glu	Gln	Met	Phe	Arg	Asp	Ile	Ala
		100						105					110		
Thr	Ile	Val	Ala	Asp	Lys	Cys	Val	Asn	Pro	Glu	Thr	Lys	Arg	Pro	Tyr
		115					120					125			
Thr	Val	Ile	Leu	Ile	Glu	Arg	Ala	Met	Lys	Asp	Ile	His	Tyr	Ser	Val

130	135	140
Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile Lys Gln		
145	150	155
Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Arg Leu Arg Phe		160
	165	170
Ile Leu Pro Val Asn Glu Gly Lys Lys Leu Lys Glu Lys Leu Lys Pro		175
	180	185
Leu Ile Lys Val Ile Glu Ser Glu Asp Tyr Gly Gln Gln Leu Glu Ile		190
	195	200
Val Cys Leu Ile Asp Pro Gly Cys Phe Arg Glu Ile Asp Glu Leu Ile		205
	210	215
Lys Lys Glu Thr Lys Gly Lys Gly Ser Leu Glu Val Leu Asn Leu Lys		220
225	230	235
Asp Val Glu Glu Gly Asp Glu Lys Phe Glu		240
	245	250

<210> 5443
 <211> 2021
 <212> DNA
 <213> Homo sapiens

<400> 5443
 cagatgcaga cactcactca gcctctgcct cagagaggta ccatgggtcc tggccacatt
 60
 aggggaagtag gcacttgaac cacctgctgt ctctctagct tatgccttga ggcggtggat
 120
 ggggaggtgg cgtgttccct ctcatctgca ataggatggt ccgaggtagc agtcctgaag
 180
 ggaacagcag ggatggtagg caggaagaat ggaggtctga ccaggctggc ggctgggaat
 240
 gaagccaggg cctttgcttc ccttggcacc tctcacaggc cctgccctct gctccacagg
 300
 ctggaggaag tccccctgga ggtgctgagg cagagggagt ccaagtggct ggacatgctc
 360
 aacaactggg acaaatggat ggccaagaag cacaaaaaga ttcgtctgcg gtgccaaaag
 420
 ggcattcccgc cttctctgcg gggccgtgct tggcagtacc tgtcaggagg caaggtgaag
 480
 ttacagcaga accctggaaa gtttgacgag ctggacatgt cccctgggga cccaagtgg
 540
 ctggacgtga ttgagcgtga cctgcaccgg cagttcccat tccatgagat gtttgtgtcc
 600
 cggggggggcc acggccagca ggacctattc cgtgtgctga aggcctacac gctgtaccgg
 660
 cccgaggagg gctactgcca ggcccaggcg cccattgccg ctgtcttgct catgcatatg
 720
 cctgctgagc aagccttctg gtgcctggta cagatctgtg agaagtacct gcccggtac
 780
 tacagcgaga aactggaggc gatccagctg gacggggaga tccttttctc gctgttgcag
 840
 aaggtgtcgc cgggtggccca caagcacctc agccgtcaga agatcgacce gctcctctat
 900
 atgacagaat ggttcatgtg cgccttctcc cgaaccttgc cttggagctc tgtgctgcgt
 960

gtctgggaca tgtttctctg tgaaggggtc aagatcatct tccgggtggg gctgggtgctg
 1020
 ctgaagcacg cgctggggtc ccctgagaag gtcaaagcct gccagggcca gtacgagacc
 1080
 atcgagcgac tgcggagcct cagccccaag atcatgcagg aggcctttct ggtccaggag
 1140
 gtgggtggagt tgcccgtagc agagcgccag attgagcgcg aacacctcat tcagctgcgg
 1200
 cgctggcagg agacccgggg tgagctgcag tgccgctccc cgcccaggct gcatggtgcc
 1260
 aaggctatct tggatgcaga acctgggtccc cggcctgccc tacaaccttc accatccatc
 1320
 cgcctgcccc tagatgcccc cctccctggc tccaaagcca agcccaagcc acccaagcag
 1380
 gcccagaagg agcagcggaa acagatgaag gggagagggc agctggagaa gccccagcc
 1440
 ccaaatacag ccattggtgtt ggccgctgca ggagatgcat gtccccaca gcatgtgccc
 1500
 ccgaaggact cagcccccaa ggactcagcc cctcaggatt tggtcccca ggtctcagcc
 1560
 caccaccgct cccaggagag cttgacgtcc caagagagtg aggacaccta cttgtaacct
 1620
 tggcagctaa ggcctccagg gcggggtctc catataacta cacggttcat gaactgacat
 1680
 tccacatcct gccaccctc tgagggccaa gctgcctggc cactgggctg ggctggagtc
 1740
 tggtcgtgcc aacacagatt ctgcctggc caacacagat tctgcctgag cctccttatt
 1800
 tattttcttt acagtggcac tcaggctggc ccagccaggg caggcagaag ctagggcctg
 1860
 ggggggtggg cctccttcag cccctcctc ctgggggatg ctccccaggg ttaggggtgt
 1920
 ggtgtgaggg gaaaggggtg ggtgttcttt gtgtaaaata gaaacatggt tttgtacaga
 1980
 aataaacagc cttgtataga gaaaaaaaaa aaaaaaaaaa a
 2021

<210> 5444

<211> 438

<212> PRT

<213> Homo sapiens

<400> 5444

Leu	Glu	Glu	Val	Pro	Leu	Glu	Val	Leu	Arg	Gln	Arg	Glu	Ser	Lys	Trp
1			5						10					15	
Leu	Asp	Met	Leu	Asn	Asn	Trp	Asp	Lys	Trp	Met	Ala	Lys	Lys	His	Lys
			20						25					30	
Lys	Ile	Arg	Leu	Arg	Cys	Gln	Lys	Gly	Ile	Pro	Pro	Ser	Leu	Arg	Gly
			35						40					45	
Arg	Ala	Trp	Gln	Tyr	Leu	Ser	Gly	Gly	Lys	Val	Lys	Leu	Gln	Gln	Asn
			50						55					60	
Pro	Gly	Lys	Phe	Asp	Glu	Leu	Asp	Met	Ser	Pro	Gly	Asp	Pro	Lys	Trp
65						70								80	
Leu	Asp	Val	Ile	Glu	Arg	Asp	Leu	His	Arg	Gln	Phe	Pro	Phe	His	Glu

					85											95
Met	Phe	Val	Ser	Arg	Gly	Gly	His	Gly	Gln	Gln	Asp	Leu	Phe	Arg	Val	
			100					105					110			
Leu	Lys	Ala	Tyr	Thr	Leu	Tyr	Arg	Pro	Glu	Glu	Gly	Tyr	Cys	Gln	Ala	
		115					120					125				
Gln	Ala	Pro	Ile	Ala	Ala	Val	Leu	Leu	Met	His	Met	Pro	Ala	Glu	Gln	
		130					135				140					
Ala	Phe	Trp	Cys	Leu	Val	Gln	Ile	Cys	Glu	Lys	Tyr	Leu	Pro	Gly	Tyr	
145					150					155					160	
Tyr	Ser	Glu	Lys	Leu	Glu	Ala	Ile	Gln	Leu	Asp	Gly	Glu	Ile	Leu	Phe	
			165					170						175		
Ser	Leu	Leu	Gln	Lys	Val	Ser	Pro	Val	Ala	His	Lys	His	Leu	Ser	Arg	
			180					185					190			
Gln	Lys	Ile	Asp	Pro	Leu	Leu	Tyr	Met	Thr	Glu	Trp	Phe	Met	Cys	Ala	
		195					200					205				
Phe	Ser	Arg	Thr	Leu	Pro	Trp	Ser	Ser	Val	Leu	Arg	Val	Trp	Asp	Met	
		210				215					220					
Phe	Phe	Cys	Glu	Gly	Val	Lys	Ile	Ile	Phe	Arg	Val	Gly	Leu	Val	Leu	
225					230					235					240	
Leu	Lys	His	Ala	Leu	Gly	Ser	Pro	Glu	Lys	Val	Lys	Ala	Cys	Gln	Gly	
			245					250						255		
Gln	Tyr	Glu	Thr	Ile	Glu	Arg	Leu	Arg	Ser	Leu	Ser	Pro	Lys	Ile	Met	
			260					265					270			
Gln	Glu	Ala	Phe	Leu	Val	Gln	Glu	Val	Val	Glu	Leu	Pro	Val	Thr	Glu	
		275					280					285				
Arg	Gln	Ile	Glu	Arg	Glu	His	Leu	Ile	Gln	Leu	Arg	Arg	Trp	Gln	Glu	
		290				295					300					
Thr	Arg	Gly	Glu	Leu	Gln	Cys	Arg	Ser	Pro	Pro	Arg	Leu	His	Gly	Ala	
305					310					315					320	
Lys	Ala	Ile	Leu	Asp	Ala	Glu	Pro	Gly	Pro	Arg	Pro	Ala	Leu	Gln	Pro	
			325					330						335		
Ser	Pro	Ser	Ile	Arg	Leu	Pro	Leu	Asp	Ala	Pro	Leu	Pro	Gly	Ser	Lys	
			340					345					350			
Ala	Lys	Pro	Lys	Pro	Pro	Lys	Gln	Ala	Gln	Lys	Glu	Gln	Arg	Lys	Gln	
		355					360					365				
Met	Lys	Gly	Arg	Gly	Gln	Leu	Glu	Lys	Pro	Pro	Ala	Pro	Asn	Gln	Ala	
		370				375					380					
Met	Val	Val	Ala	Ala	Ala	Gly	Asp	Ala	Cys	Pro	Pro	Gln	His	Val	Pro	
385					390					395					400	
Pro	Lys	Asp	Ser	Ala	Pro	Lys	Asp	Ser	Ala	Pro	Gln	Asp	Leu	Ala	Pro	
			405					410						415		
Gln	Val	Ser	Ala	His	His	Arg	Ser	Gln	Glu	Ser	Leu	Thr	Ser	Gln	Glu	

<210> 5445

<211> 1187

<212> DNA

<213> Homo sapiens

<400> 5445

gcaaggtcaa gccagctcag gggacatggt gggcaggggg ctccagatcc cacgggtgggc
60

agaaaaggcg ggggtcggac tgacgccgtc ctgggccatg tccacgtctg gggctctgag
 120
 gttccatctc cctttccact gtgcctaacc ttacatctat tacctacatc cagcaagaca
 180
 cgattttcca cgatgagttg attcgtaatt ccatttatgt gctagttttt agaattttcc
 240
 tgtgggtttt tttttactta cttatgattt taattttgtt tgctttaaaa aaaacacatg
 300
 cataggaaaag aatgcttcct ttcatttcaa ttaaaaacaa caaattgctt ttttttaagc
 360
 aaaaattcat tgaggggggg gctcgcggtg tacaaagaaa atcagacca ccgggatggc
 420
 tgtgatcaaa gagacagtaa caagggtagg gaggtggaga tgcgaaatcca aacacacaac
 480
 ttgtgcaaag gtcaagtggc cacagccgcc acggaaaaca ggctggcggt tcctccgacg
 540
 ttcaacacac agtcgccacg ggacacagtg gttccacccc caggtgtgca gcaatagaca
 600
 tcacagccca cgtccgcacg cagactcgga cacgcgtgct cacagcccac gttcgcacgc
 660
 agactcagac atgcgtgctc acagcctcag tcatgacagc cagacagtgg aaacaaggca
 720
 ggtgggcctc ggctgctgag ggagcaacag cagaacgggtg ctcagccctg gagaggaagg
 780
 acgcctggac cctggcccca caccacagca tccacaatgt ggtgccaacc aacaggccac
 840
 gcacacagag gccatgggcc agacgcttcc actgacacga aatgccaag agaggcacag
 900
 ccggcgacag aacggggacc cgtgtctgcc gcccaggag aggctgcagg ccggaaactg
 960
 gaggattaca gggcgcgagt gtcgttttag ggagatgaaa atgttctaaa attggctgtg
 1020
 gcaattgttg cacaactctg caaatatact aaaaaccact gaattgtaca tttcaaaatg
 1080
 ggtgaattgt acggtgcttg tattatacct caataaagct atttttaag aaacaaaatt
 1140
 ttaaatacgt aaaaaaatca gaaagtgaaa tctggaatta acattcc
 1187

<210> 5446

<211> 107

<212> PRT

<213> Homo sapiens

<400> 5446

Met Ala Val Ile Lys Glu Thr Val Thr Arg Val Gly Arg Trp Arg Cys
 1 5 10 15
 Glu Ser Lys His Thr Thr Cys Ala Lys Val Lys Trp Pro Gln Pro Pro
 20 25 30
 Arg Lys Thr Gly Trp Arg Phe Leu Arg Arg Ser Thr His Ser Arg His
 35 40 45
 Gly Thr Gln Trp Phe His Pro Gln Val Cys Ser Asn Arg His His Ser
 50 55 60
 Pro Arg Pro His Ala Asp Ser Asp Thr Arg Ala His Ser Pro Arg Ser

65		70		75		80									
His	Ala	Asp	Ser	Asp	Met	Arg	Ala	His	Ser	Leu	Ser	His	Asp	Ser	Gln
			85						90					95	
Thr	Val	Glu	Thr	Arg	Gln	Val	Gly	Leu	Gly	Cys					
			100					105							

<210> 5447

<211> 1444

<212> DNA

<213> Homo sapiens

<400> 5447

```

nngcaggtaa gtggtaccat catatgcccg ggacaatttg gcttgcttgt ccaagtttgc
60
aatttgctgc tttgtgaaag tgggcttcaa cacatacgtg atatcctcca atgaggaatc
120
gatgatctca tagttgtact ttgcagtaag aagacttttc agatcaccaa acaaggagat
180
ggcgttgact ttctgtcttg gtttctgaat gctctgcact cagctctggg gggcacaaaag
240
aagaaaaaga agactattgt gactgatgtt ttccaggggt ccatgaggat cttcactaaa
300
aagcttcccc atcctgatct gccagcagaa gaaaaagagc agttgctcca taatgacgag
360
taccaggaga caatggtgga gtccactttt atgtacctga cgctggacct tcctactgcc
420
ccccctaca aggacgagaa ggagcagctc atcattcccc aagtgccact cttcaacatc
480
ctggctaagt tcaatggcat cactgagaag gaataaaga cttacaagga gaactttctg
540
aagcgcttcc agcttaccaa gttgcctcca tatctaattct tttgtatcaa gagattcact
600
aagaacaact tctttgttga gaagaatcca actnattgtc aatttcccta ttacaaatgt
660
ggatctgaga gaatacttgt ctgaagaagt acaagcagta cacaagaata ccacctatga
720
cctcattgcc aacatogtgc atgacggcaa gccctccgag ggctcctacc ggatccacgt
780
gcttcatcat gggacaggca aatggtatga attacaagac ctccagggtga ctgacatcct
840
tccccagatg atcacactgt cagaggctta cattcagatt tggaagaggc gagataatga
900
tgaaaccaac cagcaggggg cttgaaggag gcgtctaggg ctttgctccc aagggctgtg
960
gctgatgatg gtaaataaga acacagaagc tgtagctgaa cacaggctgg ctggtgggct
1020
tcctaggcca gccagcttg tatgggttct ggctacacca gagcaccaag agcccacttg
1080
cctgggatgg cccacactg tcaactcagct gttctttgat catttttttc tagattgatg
1140
ctcttttctc ccatgcattg agctcccatc tagcttcagc agggcagaac cttctctccag
1200
atgtgtgtaa cttatgtctt gagtatctgg gagtagttga agaacagata attccttcca
1260

```

aacatcaagc cttgggattc ttggagcaag cagaaagcca gtaacttcgc tctgttagag
 1320
 gtggaggatt ttcctatggt tccccccatt tcctgatttg tattttttaga tggattaaat
 1380
 agtctcctgt ttttaaacca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1440
 aaaa
 1444

<210> 5448
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 5448
 Gly Ile Asp Asp Leu Ile Val Val Leu Cys Ser Lys Lys Thr Phe Gln
 1 5 10 15
 Ile Thr Lys Gln Gly Asp Gly Val Asp Phe Leu Ser Trp Phe Leu Asn
 20 25 30
 Ala Leu His Ser Ala Leu Gly Gly Thr Lys Lys Lys Lys Lys Thr Ile
 35 40 45
 Val Thr Asp Val Phe Gln Gly Ser Met Arg Ile Phe Thr Lys Lys Leu
 50 55 60
 Pro His Pro Asp Leu Pro Ala Glu Glu Lys Glu Gln Leu Leu His Asn
 65 70 75 80
 Asp Glu Tyr Gln Glu Thr Met Val Glu Ser Thr Phe Met Tyr Leu Thr
 85 90 95
 Leu Asp Leu Pro Thr Ala Pro Leu Tyr Lys Asp Glu Lys Glu Gln Leu
 100 105 110
 Ile Ile Pro Gln Val Pro Leu Phe Asn Ile Leu Ala Lys Phe Asn Gly
 115 120 125
 Ile Thr Glu Lys Glu Tyr Lys Thr Tyr Lys Glu Asn Phe Leu Lys Arg
 130 135 140
 Phe Gln Leu Thr Lys Leu Pro Pro Tyr Leu Ile Phe Cys Ile Lys Arg
 145 150 155 160
 Phe Thr Lys Asn Asn Phe Phe Val Glu Lys Asn Pro Thr Xaa Cys Gln
 165 170 175
 Phe Pro Tyr Tyr Lys Cys Gly Ser Glu Arg Ile Leu Val
 180 185

<210> 5449
 <211> 1359
 <212> DNA
 <213> Homo sapiens

<400> 5449
 tctccagagg aggaccagag gacttatggt ttccggggccc agagcgctga aatgaaggaa
 60
 cgaggggggca accagaccag tggcatogac ttctttatta cccaagaacg gattgttttc
 120
 ctggacacac agcccatcct gagcccttct atcctagacc atctcatcaa taatgaccgc
 180
 aaactgcctc cagagtacaa ccttccccac acttacgttg aaatgcagtc actccagatt
 240

gctgccttcc ttttcacggc ctgccatgtg gggattnntg tccaggactg gttcacagac
 300
 ctcagtctct acagggttcct gcagacagca gagatgggtga agccctccac cccatcccc
 360
 agccacgagt ccagcagctc atcggggtcc gatgaaggca ccgagtacta cccccaccta
 420
 gtcttcttcc agaacaaagc tcgccgagag gacttctgtc ctcggaagct gcggcagatg
 480
 cacctgatga ttgaccagct catggccccc tcccacctgc gttacaaggg aactctgtcc
 540
 atgttacaat gcaatgtctt cccggggctt ccacctgact tcctggactc tgagggtcaac
 600
 ttattcctgg tacccttcat ggacagtga gacagagagtg aaaaccacc aagagcagga
 660
 cctgggtcca gccactctt ctccctgctg cctgggtatc gtggccacc cagtttccag
 720
 tccttgggtg gcaagctccg gagccaagt atgtccatgg cccggccaca gctgtcacac
 780
 acgatectca ccgagaagaa ctgggtccac tacgtgccc ggatctggga tggggtgaga
 840
 aagtcctctg ctctggcaga gtacagccgc ctgctggcct gaggccaagg agaggaatgt
 900
 catgcagggg acctcctggg tccgcagtgt actgcgaggg agcacagatg tccatcccc
 960
 gctgggggtg agagcggcag caggcctgat ggatgaggga tcgtggcttc ccggcccaga
 1020
 gacatgaggt gtccagggcc agggccccc cctcagttg gggctgttcc gggggtgact
 1080
 gtgagcgatc ccaccccaaa cctgagatgg ggcagcccg cctgtgtcct ccacagggac
 1140
 aagcagtgga aggagtctga atgggtacca ggaagcccg gctccatctt gacctcttt
 1200
 ttcagggaca ggagcaacag gccctcttc cctgactcta agcccttccc tgtaagggtg
 1260
 ggcagggtct ggagagctct ttattggaac agatctgggt gttcaaataa acacagtcac
 1320
 gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1359

<210> 5450

<211> 293

<212> PRT

<213> Homo sapiens

<400> 5450

Ser	Pro	Glu	Glu	Asp	Gln	Arg	Thr	Tyr	Val	Phe	Arg	Ala	Gln	Ser	Ala
1				5					10					15	
Glu	Met	Lys	Glu	Arg	Gly	Gly	Asn	Gln	Thr	Ser	Gly	Ile	Asp	Phe	Phe
			20					25					30		
Ile	Thr	Gln	Glu	Arg	Ile	Val	Phe	Leu	Asp	Thr	Gln	Pro	Ile	Leu	Ser
		35					40					45			
Pro	Ser	Ile	Leu	Asp	His	Leu	Ile	Asn	Asn	Asp	Arg	Lys	Leu	Pro	Pro
	50					55					60				
Glu	Tyr	Asn	Leu	Pro	His	Thr	Tyr	Val	Glu	Met	Gln	Ser	Leu	Gln	Ile

```

65          70          75          80
Ala Ala Phe Leu Phe Thr Val Cys His Val Gly Ile Xaa Val Gln Asp
      85          90          95
Trp Phe Thr Asp Leu Ser Leu Tyr Arg Phe Leu Gln Thr Ala Glu Met
      100          105          110
Val Lys Pro Ser Thr Pro Ser Pro Ser His Glu Ser Ser Ser Ser Ser
      115          120          125
Gly Ser Asp Glu Gly Thr Glu Tyr Tyr Pro His Leu Val Phe Phe Gln
      130          135          140
Asn Lys Ala Arg Arg Glu Asp Phe Cys Pro Arg Lys Leu Arg Gln Met
145          150          155          160
His Leu Met Ile Asp Gln Leu Met Ala His Ser His Leu Arg Tyr Lys
      165          170          175
Gly Thr Leu Ser Met Leu Gln Cys Asn Val Phe Pro Gly Leu Pro Pro
      180          185          190
Asp Phe Leu Asp Ser Glu Val Asn Leu Phe Leu Val Pro Phe Met Asp
      195          200          205
Ser Glu Ala Glu Ser Glu Asn Pro Pro Arg Ala Gly Pro Gly Ser Ser
      210          215          220
Pro Leu Phe Ser Leu Leu Pro Gly Tyr Arg Gly His Pro Ser Phe Gln
225          230          235          240
Ser Leu Val Ser Lys Leu Arg Ser Gln Val Met Ser Met Ala Arg Pro
      245          250          255
Gln Leu Ser His Thr Ile Leu Thr Glu Lys Asn Trp Phe His Tyr Ala
      260          265          270
Ala Arg Ile Trp Asp Gly Val Arg Lys Ser Ser Ala Leu Ala Glu Tyr
      275          280          285
Ser Arg Leu Leu Ala
      290

```

<210> 5451

<211> 1184

<212> DNA

<213> Homo sapiens

<400> 5451

```

ncacgcctgg ctaaattttg tatttttggg agagacgggg tttcacgtgt tggccaggct
60
ggtctcgaac tgctgacctc aagtgatctg tccgcctcag cctcccaaag tgctgggatt
120
acagatgtga gccatcatgc ccggctaatt tttttgtatt ttagtagaga cagggtttca
180
ccgtgttagc caggatggtc ttgatctcct gaccttgatga tccaccagcc tcagcctccc
240
aaagtgctgg gattacaggc gtgagccact gtgcccggcc aagaattttt ttatcgataa
300
catagtgagc tctctgcctc ttcggaacga tgtccacttt gcttatgatc aaccaagca
360
ggactcttct ctccctggac gcctctcccc tgggtctggaa tcttccagtt ctgccagaat
420
tggcctttcc cagatgctgc aaacttccag ttgaaccctt ttttctgtgt ggccctggg
480
gctgcgagac caaaatccat gagttctgtg taccctagac ctttgaagg tgagagcagg
540

```

gccctgagaa aaggcagcca cctcctctcc ctggctgaac ccctgccacc ctactcctca
 600
 ccagaattgt cagtggcctt tcaccacagt ggtccttctt gcctgagccc tgcactgtcc
 660
 cagaccacac agaagtctgg tcacctctgg gcgcctggga tggtcaccga agagaagcac
 720
 gctgtccccg tctctcctgg cttctgccag aaaatcgaac aagtgcatt aacacactgt
 780
 tactgccgaa gcctgaaact ccaggactt gtccttgatc cttccagaaa ccaccaggtc
 840
 cggcacttgg agccccccgg agagggacct ccagccgag ccctcaaaga actccatgaa
 900
 atcaggaact gcttgatgaa atgtatctcc ttgtacctgg aagatgaagc ccaaacaccc
 960
 acacctctgt ctccccagg gctcgggatg tctccagcag ccgaggccag cagcttccca
 1020
 ggtgggctcg gggaggtggg agcagggacc atctctgtcc cctccaccct cactccatcc
 1080
 acctcggaga ccacctctcc ccagccagat acggaataaa actacagacg cagacgtcgg
 1140
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1184

<210> 5452

<211> 206

<212> PRT

<213> Homo sapiens

<400> 5452

Met Ser Ser Val Tyr Pro Arg Pro Leu Glu Gly Glu Ser Arg Ala Leu
 1 5 10 15
 Arg Lys Gly Ser His Leu Leu Ser Leu Ala Glu Pro Leu Pro Pro Tyr
 20 25 30
 Ser Ser Pro Glu Leu Ser Val Ala Phe His His Ser Gly Pro Ser Cys
 35 40 45
 Leu Ser Pro Ala Leu Ser Gln Thr Thr Gln Lys Ser Gly His Leu Trp
 50 55 60
 Ala Pro Gly Met Val Thr Glu Glu Lys His Ala Val Pro Val Ser Pro
 65 70 75 80
 Gly Phe Cys Gln Lys Ile Glu Gln Val Gln Leu Thr His Cys Tyr Cys
 85 90 95
 Arg Ser Leu Lys Leu Pro Gly Leu Val Leu Asp Pro Ser Arg Asn His
 100 105 110
 Gln Val Arg His Leu Glu Pro Pro Gly Glu Gly Pro Pro Ser Arg Ala
 115 120 125
 Leu Lys Glu Leu His Glu Ile Arg Asn Cys Leu Met Lys Cys Ile Ser
 130 135 140
 Leu Tyr Leu Glu Asp Glu Ala Gln Thr Pro Thr Pro Leu Ser Pro Pro
 145 150 155 160
 Gly Leu Gly Met Ser Pro Ala Ala Arg Pro Arg Ser Phe Pro Gly Gly
 165 170 175
 Leu Gly Glu Val Gly Ala Gly Thr Ile Ser Val Pro Ser Thr Leu Thr
 180 185 190
 Pro Ser Thr Ser Glu Thr Thr Leu Pro Gln Pro Asp Thr Glu

195 200 205

<210> 5453
<211> 1974
<212> DNA
<213> Homo sapiens

<400> 5453
ntcggcaggc cggccatgga gccaggcagc gtggagaacc tgtccatcgt gtaccggagc
60
cgcgacttcc tgggtgtcaa caagcactgg gacgttcgca ttgacagcaa ggcgtggcgg
120
gagactctga ccctgcagaa gcagctgcgg taccgctttc ccgagctggc cgaccctgac
180
acctgctacg gggtcaggtt ctgccaccag ctggatttct ccaccagcgg ggcgtgtgac
240
gtggccctaa acaaggcagc cgccggcagc gcgtacaggt gcttcaagga gcggcgcgtg
300
accaaggctt acctggcatt gctgcggggg cacatccagg agagccgggt aaccatcagc
360
catgccattg gcaggaacag cacggagggc cgggccca ccatgtgcat cgagggtcgc
420
cagggtgtgg caggttgtga gaacccaaag ccaagcctca cagatctcgt ggttctggaa
480
cacgggctgt acgcaggcga tcctgtctcc aaagtgtctc tgaagccgct cacgggccgg
540
acacaccagc tgcgcgtgca ctgcagtgcc ctgggccacc ccgtggtggg cgacctgacc
600
tacggagaag tctcgggccg ggaggaccgg ccgttcagaa tgatgctgca cgctttctac
660
ctgcgcattc ccacggacac cgagtgtgtg gaggtctgca cgctgaccc ctctctgccc
720
tccttgatg cctgctggag cccccacaca ctgctgcagt cgctggacca gctcgtgcag
780
gccttacggg ccacccccga ccctgacccc gaggataggg gccccaggcc aggcagcccc
840
tccgactcc tgctggggc cgccggcct cctccacccc caaccaagcc ccctgagact
900
gaggcacagc gggggccctg cctgcagtgg ctgtcggagt ggacgctgga accggacagc
960
tgagagccgt ggggctgggg cagggggtgt cagctgcaca gcgggactct agggagatgg
1020
gcgagcgagc gtctgctcac tggctctggg gcctcgaggt gccaggcagc atcaggccca
1080
ctgggttgcc ccggccaggc ctgcgaggaa gggctgaggt ggggcccggc gggggcgcca
1140
ggcagccgtg atcacaggtg acgaccgcac cgccggcgtg ggactgatgc gggatccccg
1200
gggccttctt gccacatgc cccgggagaa accgaggccc ctccctctc ctggaacagc
1260
ttccggctct caagcgtcac cccaggggag tcagttttac ggactcaagg tcacctcagg
1320
aagaggcagg gccaggtttt gggataggct ttgcctccag gatgggctgc tcctgggcct
1380

ggtgagctac tgcccccaac ctaccctcta gaggggctgg gaagggccgt tctgggctca
 1440
 cctggcctgg gagaccatc tgggccctgc gtcctctgcc cctcactgct ctgtgcagat
 1500
 cctgtcgccc tcagctgcct cctcccgaga cctaattggc cctgctgggc tcgagtctgc
 1560
 agggccggct gcgtgtgcct tggccctact gtaccagtgg ttccctctct gcccggtatc
 1620
 tgagctcagt gtggtgtttg gtgcacaggg gttggtcagg ggccatggcc aaggccctgc
 1680
 cacgcacgcc catccctcag atccactgtg agcaccaacc tgctgcagtc tcttggggccc
 1740
 ctgctggcag ctctgccacg tcaccgcctg cctggctccc acacagccat gcattgtcac
 1800
 tctgcctccg ggaccccagc ttgggagctg tgggtctgcc aggtcccacc tcctctgtcc
 1860
 cccatgccac aacctgggct cctggctaca gcagggctcc agggactcca aataaatgtt
 1920
 cagtgaactgg caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1974

<210> 5454

<211> 320

<212> PRT

<213> Homo sapiens

<400> 5454

Xaa	Gly	Arg	Pro	Ala	Met	Glu	Pro	Gly	Ser	Val	Glu	Asn	Leu	Ser	Ile
1				5					10					15	
Val	Tyr	Arg	Ser	Arg	Asp	Phe	Leu	Val	Val	Asn	Lys	His	Trp	Asp	Val
			20					25					30		
Arg	Ile	Asp	Ser	Lys	Ala	Trp	Arg	Glu	Thr	Leu	Thr	Leu	Gln	Lys	Gln
		35				40					45				
Leu	Arg	Tyr	Arg	Phe	Pro	Glu	Leu	Ala	Asp	Pro	Asp	Thr	Cys	Tyr	Gly
	50					55				60					
Phe	Arg	Phe	Cys	His	Gln	Leu	Asp	Phe	Ser	Thr	Ser	Gly	Ala	Leu	Cys
65				70					75					80	
Val	Ala	Leu	Asn	Lys	Ala	Ala	Ala	Gly	Ser	Ala	Tyr	Arg	Cys	Phe	Lys
			85					90					95		
Glu	Arg	Arg	Val	Thr	Lys	Ala	Tyr	Leu	Ala	Leu	Leu	Arg	Gly	His	Ile
			100					105					110		
Gln	Glu	Ser	Arg	Val	Thr	Ile	Ser	His	Ala	Ile	Gly	Arg	Asn	Ser	Thr
		115					120					125			
Glu	Gly	Arg	Ala	His	Thr	Met	Cys	Ile	Glu	Gly	Ser	Gln	Gly	Val	Ala
	130					135					140				
Gly	Cys	Glu	Asn	Pro	Lys	Pro	Ser	Leu	Thr	Asp	Leu	Val	Val	Leu	Glu
145				150					155					160	
His	Gly	Leu	Tyr	Ala	Gly	Asp	Pro	Val	Ser	Lys	Val	Leu	Leu	Lys	Pro
			165					170					175		
Leu	Thr	Gly	Arg	Thr	His	Gln	Leu	Arg	Val	His	Cys	Ser	Ala	Leu	Gly
		180						185					190		
His	Pro	Val	Val	Gly	Asp	Leu	Thr	Tyr	Gly	Glu	Val	Ser	Gly	Arg	Glu
		195				200						205			
Asp	Arg	Pro	Phe	Arg	Met	Met	Leu	His	Ala	Phe	Tyr	Leu	Arg	Ile	Pro

210	215	220
Thr Asp Thr Glu Cys Val Glu Val Cys Thr Pro Asp Pro Phe Leu Pro		
225	230	235
Ser Leu Asp Ala Cys Trp Ser Pro His Thr Leu Leu Gln Ser Leu Asp		240
	245	250
Gln Leu Val Gln Ala Leu Arg Ala Thr Pro Asp Pro Asp Pro Glu Asp		255
	260	265
Arg Gly Pro Arg Pro Gly Ser Pro Ser Ala Leu Leu Pro Gly Pro Gly		270
	275	280
Arg Pro Pro Pro Pro Pro Thr Lys Pro Pro Glu Thr Glu Ala Gln Arg		285
	290	295
Gly Pro Cys Leu Gln Trp Leu Ser Glu Trp Thr Leu Glu Pro Asp Ser		300
305	310	315
		320

<210> 5455

<211> 975

<212> DNA

<213> Homo sapiens

<400> 5455

```

nggtgaggct caaactctct ctttctcctt gtcataacta ttggtttaca gtctttattt
60
gtttaaaagt aaagcacatt gtatgtattt atttggcaat acatgaggcc attaaaaccc
120
tgagcctaag gtaccacagt tagtctcatt tgctcttgt cctgtgaact ccacttagaa
180
tgtcattgaa cttgggcaga cataattcta gtgtctgttc caaacgcact gtgtcacaga
240
agctagaatt accattagag gcacaaaccc ctgagaatac acaagggggc acgcttccag
300
tagatgtgtt ggggaaggag gagggcagag gggacagggg acaggattca gctttgtggt
360
gggtcctgag ggttcctacc aggggtagcc aggatctggg aaacagatca gcgactctag
420
tctgaagtgg ctgcctgggt cgggggctgc cttcagcaag attcaggcag gagagacgga
480
aatagccacc ttccaggcgt gagtcctgga gataaaaatg gattttaacc taggactgcc
540
gggagctggc cctccgcggc tgctcagact agggctgtgt gtgctggctc tcgctgttt
600
ccggtgtcta actggcttgt ttctctttat ggcttggtt cattccgacc tggggtgggg
660
ccacatccaa cccactgccc actggctgtc cgtctggcct gcccgcggg tccaaccaca
720
gtggtgaagc agcgcttgca gatgtacaac tcgcagcacc ggtcagcaat cagctgcac
780
cggacggtgt ggaggaccga ggggttgggg gccttctacc ggagctacac cacgcagctg
840
accatgaaca tccccttcca gtccatccac ttcacacct atgagttcct gcaggagcag
900
gtcaaccccc accggacctt caaccgcgag tcccacatca tctcaggcgg gctggccggg
960
gccctcgccg cggcg
975

```


<210> 5456
 <211> 149
 <212> PRT
 <213> Homo sapiens

<400> 5456
 Pro Arg Thr Ala Gly Ser Trp Pro Ser Ala Ala Ala Gln Thr Arg Ala
 1 5 10 15
 Val Cys Ala Gly Ser Arg Leu Phe Pro Val Ser Asn Trp Leu Val Ser
 20 25 30
 Leu Tyr Gly Leu Ala Ser Phe Arg Pro Gly Val Gly Pro His Pro Thr
 35 40 45
 His Cys Pro Leu Ala Val Arg Leu Ala Cys Pro Ala Val Pro Thr Thr
 50 55 60
 Val Val Lys Gln Arg Leu Gln Met Tyr Asn Ser Gln His Arg Ser Ala
 65 70 75 80
 Ile Ser Cys Ile Arg Thr Val Trp Arg Thr Glu Gly Leu Gly Ala Phe
 85 90 95
 Tyr Arg Ser Tyr Thr Thr Gln Leu Thr Met Asn Ile Pro Phe Gln Ser
 100 105 110
 Ile His Phe Ile Thr Tyr Glu Phe Leu Gln Glu Gln Val Asn Pro His
 115 120 125
 Arg Thr Tyr Asn Pro Gln Ser His Ile Ile Ser Gly Gly Leu Ala Gly
 130 135 140
 Ala Leu Ala Ala Ala
 145

<210> 5457
 <211> 448
 <212> DNA
 <213> Homo sapiens

<400> 5457
 cgcagcggga gcgtgggcag ccaggcgggtg gcgcggagga tggatgggga cagccgagat
 60
 ggcgccggcg gcaaggacgc caccgggtcg gaggactacg agaacctgcc gactagcgcc
 120
 tccgtgtcca cccacatgac agcaggagcg atggccggga tcctggagca ctcggtcatg
 180
 taccgggtgg actcggtgaa ggtaatgtgg actgtggagc tctgtgctgg tcactttcaa
 240
 ccctgaacct gatgctactt attttgagc tctaagtga aagtcggcct ggtggatgct
 300
 tcccattata atattaaatt tgcttcttcg tgaggtcaca cctcacatcc ccagtgtcac
 360
 tttaataact agtgtttttt acatgggtggg ccatgaccca ttagtggact ctgcatttaa
 420
 aaataaataa ataaataaaa gaaaaaaaa
 448

<210> 5458
 <211> 81
 <212> PRT

<213> Homo sapiens

<400> 5458

```

Arg Ser Gly Ser Val Gly Ser Gln Ala Val Ala Arg Arg Met Asp Gly
 1           5           10           15
Asp Ser Arg Asp Gly Gly Gly Gly Lys Asp Ala Thr Gly Ser Glu Asp
      20           25           30
Tyr Glu Asn Leu Pro Thr Ser Ala Ser Val Ser Thr His Met Thr Ala
      35           40           45
Gly Ala Met Ala Gly Ile Leu Glu His Ser Val Met Tyr Pro Val Asp
      50           55           60
Ser Val Lys Val Met Trp Thr Val Glu Leu Cys Ala Gly His Phe Gln
65           70           75           80
Pro

```

<210> 5459

<211> 1468

<212> DNA

<213> Homo sapiens

<400> 5459

```

nncgccatgg cgtcaggcgc cgcggccccc gggaggtggc tcccacttta agaagtgaag
60
ttttgcgccc ctccccctcc ctgcccacct cctgcagcct cctgcgcccc gccgagctgg
120
cggatggagc tgcgcagcgg gagcgtgggc agccaggcgg tggcgcgagg gatggatggg
180
gacagccgag atggcgggcg cggcaaggac gccaccgggt cggaggacta cgagaacctg
240
ccgactagcg cctccgtgtc caccacatg acagcaggag cgatggcggg gatcctggag
300
cactcgggtca tgtaccgggt ggactcgggt aagacacgaa tgcagagttt gagtccagat
360
cccaaagccc agtacacaag tatctacgga gccctcaaga aaatcatgca gaccgaaggc
420
ttctggaggc ccttgcgagg cgtcaacgtc atgatcatgg gtgcagggcc agcccatgcc
480
atgtattttg cctgctatga aaacatgaaa aggacttta atgacgtttt ccaccaccaa
540
ggaaacagcc acctagccaa cggatatttg aaagcgtttg tctggagtta gaaagtcttc
600
ttcttcaaca cgtccctccc cagggtgttc ctccctgtga ccagccggc tgcacttcgg
660
cccgcttget cacgaataaa gaactcagag ttgtgtgtgc aatgcacacc cagacacacg
720
cacgcacaca cgcgcgcgcg cacacacatg cttttttctg ttccctccg ctttctgaag
780
cctgggggaga aatcagtgtg agaggtgttt tgggttttatt gttatgtggg ttttcttttg
840
tatttttttt gtttgttttg tttttaaaca ttcaaaagca attaattgat agacatagga
900
gaaaccctga atagaaacaa aacttttgaa tgctggattc aaaaaaaaaa aaaagttatc
960

```

tggacagctt ctttgagact atttaaaaac tggtaacaac ggtctctaca acgccaagat
 1020
 ctaactaagc tttaaaaggt caagaagttt tatggctgac aaaggactcg cgcaacgcag
 1080
 aaggcctttc ccaccttaag cttccgggga tctgggaatt ttacccccat tctcttctgt
 1140
 ttgtctgagt ctcattcttc tgcaagcaag ggctgaaatc attttgtttg ggatagctgg
 1200
 gagtatggcc accctgctcc acgatgcggt aatgaatcca gcagaaggta atgtttcatg
 1260
 gtcccagga ggggcagtag gggatgtgca aaggggcaca aaaaaatggg tgtgggagag
 1320
 tggagaggac tgaaggtggg cagacggctc ctagtctcca gtcagagcag acaggagaat
 1380
 tgaatttttt actacgttat caaaggcctc aagaaaggac gtgaacataa gagtttttgg
 1440
 tattcctgtg ctcggagcta cttcaaag
 1468

<210> 5460

<211> 155

<212> PRT

<213> Homo sapiens

<400> 5460

Met	Glu	Leu	Arg	Ser	Gly	Ser	Val	Gly	Ser	Gln	Ala	Val	Ala	Arg	Arg
1				5				10					15		
Met	Asp	Gly	Asp	Ser	Arg	Asp	Gly	Gly	Gly	Gly	Lys	Asp	Ala	Thr	Gly
			20					25					30		
Ser	Glu	Asp	Tyr	Glu	Asn	Leu	Pro	Thr	Ser	Ala	Ser	Val	Ser	Thr	His
			35				40					45			
Met	Thr	Ala	Gly	Ala	Met	Ala	Gly	Ile	Leu	Glu	His	Ser	Val	Met	Tyr
			50				55				60				
Pro	Val	Asp	Ser	Val	Lys	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro
65					70				75					80	
Lys	Ala	Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Gln
			85					90					95		
Thr	Glu	Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met
			100					105					110		
Gly	Ala	Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met
			115				120					125			
Lys	Arg	Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu
			130				135					140			
Ala	Asn	Gly	Ile	Leu	Lys	Ala	Phe	Val	Trp	Ser					
145						150				155					

<210> 5461

<211> 1725

<212> DNA

<213> Homo sapiens

<400> 5461

nnagtcgcgc ccgcaggtgg tgcttgtctg cagagtcacg acctctttcc gcttggccct
 60

catccagctt cagatctctt ccatcaaata agataacgtc actcgcgctt gtagcttcat
120
ccgggaggca gcaacgcaag gagccaaaat agtttctttg ccggaatgct ttaattctcc
180
atatggagcg aaatatcttc ctgaatatgc agagaaaatt cctgggtgaat ccacacagaa
240
gctttctgaa gtagcaaagg aatgcagcat atatctcatt ggaggtaact tcctaccac
300
aaggctctat ccctgaagag gatgctggga aattatataa cacctgtgct gtgtttgggc
360
ctgatggaac tttagtagca aagtatagaa agatccatct gtttgacatt gatgttcctg
420
gaaaaattac atttcaagaa tctaaaacat tgagtccggg tgatagtttc tccacatttg
480
atactcgtat gtaccagata agtttgcttc tttagcaata tcagtagaag acaatcagg
540
atttatttct tttttgtctc tctccgattt cttcacataa cctaactgaa agaccataag
600
tgagaaaggc agagaatcat cacagatctg gaaagtccgg gcttatttga gaactaagga
660
tttgacacga ttttgccctt tgatttgatt gtagcttctt gttacggctt ccagagtata
720
cctattaggc tacagttgag tacctcccat ctagataata agcattcaat tagaatgaat
780
ttctcatctt tactccgctg atgtaaatga tgtctttatg agatgaagtc caagtaggaa
840
tgagcttgta aattatctct gtcctcaggc cctgtgttaa tttatccctg tcagtgtttt
900
gtgatcatta tgtcatggag gatttccctt gccacaccat gctgtaggga gttaactttt
960
catttggtgca ttttctgttt ggaaacagct tactgcagag tgggtctggg catctgctac
1020
gacatgcggc ttgcagagct tgcacaaata tacgcacaga gaggctgcca gctgttggt
1080
tatccaggag cttttaatct gaccactgga ccagccattt gggagttact tcagcgaagc
1140
cgggctgttg ataatacagg gtatgtggcc acagcctctc ctgcccggga tgacaaagc
1200
tcctatgttg cctggggaca cagcacctg gtgaaccctt ggggggaggt tctagccaaa
1260
gctggcacag aagaagcaat cgtgtattca gacatagacc tgaagaagct ggctgaaata
1320
cgccagcaaa tccccgtttt tagacagaag cgatcagacc tctatgctgt ggagatgaaa
1380
aagccctaaa gtttatgttt ctaatgtgtc acagaatagg acgatatgat tctacaacat
1440
aatcaactcc ctattaaatt ctttaataaa gatttttttt ttaattcggc cttgtccttc
1500
ctagggttctc tattgagatg agaaagcctc attatgctga cttttccac gccacattaa
1560
atagttaaaa aggatgcagc ctggagccag agagcagaaa gctgggctgg ttctgaagct
1620
tcttccatac ttaagttgcc tccaagcagt ttgtgaaagt atcagatcct ggtatcctgg
1680

tgattgattc acctaataata aatatatttg tgccatgaac ctctt
1725

<210> 5462

<211> 159

<212> PRT

<213> Homo sapiens

<400> 5462

Met	Ser	Trp	Arg	Ile	Ser	Pro	Ala	Thr	Pro	Cys	Cys	Arg	Glu	Leu	Thr
1				5					10					15	
Phe	His	Leu	Cys	Ile	Phe	Cys	Leu	Glu	Thr	Ala	Tyr	Cys	Arg	Val	Gly
			20					25					30		
Leu	Gly	Ile	Cys	Tyr	Asp	Met	Arg	Phe	Ala	Glu	Leu	Ala	Gln	Ile	Tyr
		35					40					45			
Ala	Gln	Arg	Gly	Cys	Gln	Leu	Val	Tyr	Pro	Gly	Ala	Phe	Asn	Leu	
	50					55				60					
Thr	Thr	Gly	Pro	Ala	His	Trp	Glu	Leu	Leu	Gln	Arg	Ser	Arg	Ala	Val
65					70					75				80	
Asp	Asn	Gln	Val	Tyr	Val	Ala	Thr	Ala	Ser	Pro	Ala	Arg	Asp	Asp	Lys
			85						90				95		
Ala	Ser	Tyr	Val	Ala	Trp	Gly	His	Ser	Thr	Val	Val	Asn	Pro	Trp	Gly
			100					105				110			
Glu	Val	Leu	Ala	Lys	Ala	Gly	Thr	Glu	Glu	Ala	Ile	Val	Tyr	Ser	Asp
		115					120				125				
Ile	Asp	Leu	Lys	Lys	Leu	Ala	Glu	Ile	Arg	Gln	Gln	Ile	Pro	Val	Phe
	130					135					140				
Arg	Gln	Lys	Arg	Ser	Asp	Leu	Tyr	Ala	Val	Glu	Met	Lys	Lys	Pro	
145					150					155					

<210> 5463

<211> 792

<212> DNA

<213> Homo sapiens

<400> 5463

nnntttttttt ttttttaaag cctggattgt aaccagattt tcttttttcc cccttctcag
60
ctgtagatat gatattctct ttcagggccc cagcttaagg gcaaagtgag ttaatgtgta
120
gacaaaggcg agggacaaga gagagttaac atctagacag tggaaaaagc catggtgtgt
180
ggtttctggg aaccaccaac acttgcaggt ttagcttttt cccaggggtg actacaagaa
240
agaaaacat gtttttgcaa gattaaaatg tggttgagtg tgcctaaatt aaccatcccc
300
atttttatca tatttccacc atcacttcag ggttttaaga gtcagtgtc acctgggchg
360
agctggtagt acattttgct tcttagaaag ctaagtcctg ggttccgtct gatttttaggt
420
tccaggaact tcttgagaac acccgatcgc agagggtaat tttctggagt ttgttttgca
480
gggatagctg ggagtatggc caccctgtc caccgatcgg taatgaatcc agcagaagtg
540

gtgaagcagc gcttgcagat gtacaactcg cagcaccggt cagcaatcag ctgcatccgg
 600
 acggtgtgga ggaccgaggg gttggggggcc ttctaccgga gctacaccac gcagctgacc
 660
 atgaacatcc ccttccagtc catccacttc atcacctatg agttcctgca ggagcaggtc
 720
 aacccccacc ggacctacaa cccgcagtcc cacatcatct caggcgggct ggccggggcc
 780
 ctgcccggg cc
 792

<210> 5464

<211> 111

<212> PRT

<213> Homo sapiens

<400> 5464

Phe	Ser	Gly	Val	Cys	Phe	Ala	Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu
1				5					10					15	
Leu	His	Asp	Ala	Val	Met	Asn	Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu
			20					25					30		
Gln	Met	Tyr	Asn	Ser	Gln	His	Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr
	35					40					45				
Val	Trp	Arg	Thr	Glu	Gly	Leu	Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr
	50				55					60					
Gln	Leu	Thr	Met	Asn	Ile	Pro	Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr
65				70					75					80	
Glu	Phe	Leu	Gln	Glu	Gln	Val	Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln
			85				90						95		
Ser	His	Ile	Ile	Ser	Gly	Gly	Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	
			100				105						110		

<210> 5465

<211> 497

<212> DNA

<213> Homo sapiens

<400> 5465

tttgacggtc ttcagggttta tttcttaaata caattaggaa ataaaaccac agtgcccagg
 60
 aaagtgcaca tgagacgcca cgggtgtctct tgccatggcc ccaccactcc agggggccagg
 120
 ggggtgctgct ggagggagga cagacggaca ggcggcctgg gtggccggcc ccagaaaggc
 180
 tggcgtggat gttcgagatg agccaccagc gaagccagta gggatgtctg ggccgtcctg
 240
 gtgggattgt ctgggacatc gccaccaaca cgggtgtcaga gccatcagtg gggacatcgg
 300
 agggggccacc accagggtggg gtatatattcaa caggctagaa cccctgaggc ttgagaggcc
 360
 aacccccggc aggagacctc ccctgacccc tctgctgcct ctctgtggg accctccagt
 420
 agacacacca gatgaggaca cccaggaggc ctctcccag gacaggaggc agctgctgg
 480

gcagccacgc agtgcac
497

<210> 5466
<211> 134
<212> PRT
<213> Homo sapiens

<400> 5466
Met Ala Pro Pro Leu Gln Gly Pro Gly Gly Ala Ala Gly Gly Arg Thr
1 5 10 15
Asp Gly Gln Ala Ala Trp Val Ala Gly Pro Arg Lys Ala Gly Val Asp
20 25 30
Val Arg Asp Glu Pro Pro Ala Lys Pro Val Gly Met Ser Gly Pro Ser
35 40 45
Trp Trp Asp Cys Leu Gly His Arg His Gln His Gly Val Arg Ala Ile
50 55 60
Ser Gly Asp Ile Gly Gly Ala Thr Thr Arg Trp Gly Ile Phe Asn Arg
65 70 75 80
Leu Glu Pro Leu Arg Leu Glu Arg Pro Thr Pro Gly Arg Arg Pro Pro
85 90 95
Leu Thr Pro Leu Leu Pro Leu Leu Trp Asp Pro Pro Val Asp Thr Pro
100 105 110
Asp Glu Asp Thr Gln Glu Ala Ser Ser Gln Asp Arg Arg Gln Leu Pro
115 120 125
Gly Gln Pro Arg Ser Ala
130

<210> 5467
<211> 1329
<212> DNA
<213> Homo sapiens

<400> 5467
gtcgaatatc catgcagccg cgccgccgcc ctggagtgcg ggaagcccag tggaaggggg
60
tcccggggagc cggctgcgat ggacgccgctc ttggaacctc tcccggccga caggctgttc
120
cccggatcca gcttctctga cttgggggat ctgaacgagt cggacttctc caacaatgcg
180
cactttctctg agcacctgga ccactttacg gagaacatgg aggacttctc caatgacctg
240
ttcagcagct tctttgatga ccctgtgctg gatgagaaga gccctctatt ggacatggaa
300
ctggactccc ctacgccagg catccaggcg gagcacagct actccctgag cggcgactca
360
gcgccccaga gcccccttgt gcccatcaag atggaggaca ccacccaaga tgcagagcat
420
ggagcatggg cgctgggaca caaactgtgc tccatcatgg tgaagcagga gcagagcccc
480
gagctgcccg tggacctctt ggctgcccc tcggccatgg ctgccgcggc cgccatggcc
540
accacccgc tgctgggcct cagccccctg tccaggctgc ccatcccca ccaggccccg
600

ggagagatga ctcagctgcc agtgatcaaa gcagagcctc tggaggtgaa ccagttcctc
 660
 aaagtgcacac cggaggacct ggtgcagatg cctccgacgc cccccagcag ccatggcagt
 720
 gacagcgacg gctcccagag tccccgctct ctgccccctt ccagccctgt caggcccatg
 780
 gcgcgctcct ccacggccat ctccagctcc ccactcctca cggctcctca taaattacag
 840
 gggacatcag gccctctggg cctgacagag gaggagaaga ggaccctgat tgctgagggc
 900
 tatcccatcc ccaccaaact cccctcacc aaatcagagg agaaggcctt gaagaaaatt
 960
 cggaggaaga tcaagaataa gatttctgct caggaaagta ggagaaagaa gaaagaatac
 1020
 atggacagcc tggagaaaaa agtggagtct tgttcaactg agaacttggg gcttcggaag
 1080
 aaggtagaga ccctggagaa tgccaacagc ttctccagcg ggatccagcc actcctctgt
 1140
 tccctgattg gcctggagaa tcccacctga cccccaccc caccctctg tctctggctg
 1200
 gggttccttt ctggcccaaa gtaggtccaa gccctttag tttattcgcc acctgctgta
 1260
 cattgtggga actgcaaccc ctacgtgccc gtttgggtgg agagagatta aacatttgcc
 1320
 caccaaaaa
 1329

<210> 5468

<211> 363

<212> PRT

<213> Homo sapiens

<400> 5468

Met	Asp	Ala	Val	Leu	Glu	Pro	Phe	Pro	Ala	Asp	Arg	Leu	Phe	Pro	Gly
1				5				10					15		
Ser	Ser	Phe	Leu	Asp	Leu	Gly	Asp	Leu	Asn	Glu	Ser	Asp	Phe	Leu	Asn
		20						25					30		
Asn	Ala	His	Phe	Pro	Glu	His	Leu	Asp	His	Phe	Thr	Glu	Asn	Met	Glu
		35					40					45			
Asp	Phe	Ser	Asn	Asp	Leu	Phe	Ser	Ser	Phe	Phe	Asp	Asp	Pro	Val	Leu
	50				55					60					
Asp	Glu	Lys	Ser	Pro	Leu	Leu	Asp	Met	Glu	Leu	Asp	Ser	Pro	Thr	Pro
65				70					75					80	
Gly	Ile	Gln	Ala	Glu	His	Ser	Tyr	Ser	Leu	Ser	Gly	Asp	Ser	Ala	Pro
			85					90						95	
Gln	Ser	Pro	Leu	Val	Pro	Ile	Lys	Met	Glu	Asp	Thr	Thr	Gln	Asp	Ala
		100						105					110		
Glu	His	Gly	Ala	Trp	Ala	Leu	Gly	His	Lys	Leu	Cys	Ser	Ile	Met	Val
	115					120						125			
Lys	Gln	Glu	Gln	Ser	Pro	Glu	Leu	Pro	Val	Asp	Pro	Leu	Ala	Ala	Pro
	130					135					140				
Ser	Ala	Met	Ala	Ala	Ala	Ala	Met	Ala	Thr	Thr	Pro	Leu	Leu	Gly	
145				150					155					160	
Leu	Ser	Pro	Leu	Ser	Arg	Leu	Pro	Ile	Pro	His	Gln	Ala	Pro	Gly	Glu


```
<210> 5469
<211> 1292
<212> DNA
<213> Homo sapiens
```

```

<400> 5469
nnccgcgcccg cgtcgacgga aggggaggac gtgggatggt ggcggagctg gctgcagcag
60
agctaccaag cagtcaaaga gaagtcctct gaagccttg agtttatgaa gcgggacctg
120
acggagttaa cccagggtgt gcagcatgac acggcctgta ccatcgcagc cacggccagc
180
gtggtcaagg agaagctggc tacggaaggc tcctcaggag caacagagaa gatgaagaaa
240
gggttatctg acttcttagg ggtgatctca gacaccttg ccccttcgcc agacaaaacc
300
atcgactgcg atgtcatcac cctgatgggc acaccgtctg gcacagctga gccctatgat
360
ggcaccaagg ctgcctcta tagcctgcag tcggaccag caacctactg taatgaacca
420
gatgggcccc cggaattgtt tgacgcctgg ctttcccagt tctgcttga ggagaagaag
480
ggggagatct cagagctcct tgtaggcagc ccctccatcc gggccctcta caccaagatg
540
gttccagcag ctgtttcca ttcagaattc tggcatcggg atttctataa agtccatcag
600
ttagagcagg agcaggcccc gagggacgcc ctgaagcagc gggcggaaca gagcatctct
660

```

gaagagcccg gctgggagga ggaggaagag gagctcatgg gcatttcacc catatctcca
 720
 aaagaggcaa aggttcctgt ggccaaaatt tctacattcc ctgaaggaga acctggcccc
 780
 cagagcccct gtgaagagaa tctggtgact tcagttgagc cccagcaga ggtgactcca
 840
 tcagagagca gtgagagcat ctccctcgtg acacagatcg ccaaccggc cactgcacct
 900
 gaggcacgag tgctacccaa ggacctgtcc caaaagctgc tagaggcatc cttggaggaa
 960
 cagggcctgg ctgtggatgt gggtagact ggacctcac cccctattca ctccaagccc
 1020
 ctaacgcctg ctggccacac cggcggccca gagcccaggc ctccagccag agtagagact
 1080
 ctgagggagg aggcgcccac agacttacgg gtgtttgagc tgaactcgga tagtgggaag
 1140
 tctacaccct ccaacaatgg aaagaaaggc tcaagcacgg acatcagtga ggactgggag
 1200
 aaagactttg acttggacat gactgaagag gaggtgcaga tggcactttc caaagtggat
 1260
 gcctccgggg agctgaagat gtagaggggg aa
 1292

<210> 5470

<211> 427

<212> PRT

<213> Homo sapiens

<400> 5470

Xaa	Ala	Ala	Ala	Ser	Thr	Glu	Gly	Glu	Asp	Val	Gly	Trp	Trp	Arg	Ser
1				5					10					15	
Trp	Leu	Gln	Gln	Ser	Tyr	Gln	Ala	Val	Lys	Glu	Lys	Ser	Ser	Glu	Ala
			20					25					30		
Leu	Glu	Phe	Met	Lys	Arg	Asp	Leu	Thr	Glu	Phe	Thr	Gln	Val	Val	Gln
		35				40						45			
His	Asp	Thr	Ala	Cys	Thr	Ile	Ala	Ala	Thr	Ala	Ser	Val	Val	Lys	Glu
	50					55					60				
Lys	Leu	Ala	Thr	Glu	Gly	Ser	Ser	Gly	Ala	Thr	Glu	Lys	Met	Lys	Lys
65				70					75					80	
Gly	Leu	Ser	Asp	Phe	Leu	Gly	Val	Ile	Ser	Asp	Thr	Phe	Ala	Pro	Ser
			85					90						95	
Pro	Asp	Lys	Thr	Ile	Asp	Cys	Asp	Val	Ile	Thr	Leu	Met	Gly	Thr	Pro
		100						105					110		
Ser	Gly	Thr	Ala	Glu	Pro	Tyr	Asp	Gly	Thr	Lys	Ala	Arg	Leu	Tyr	Ser
		115					120					125			
Leu	Gln	Ser	Asp	Pro	Ala	Thr	Tyr	Cys	Asn	Glu	Pro	Asp	Gly	Pro	Pro
	130					135					140				
Glu	Leu	Phe	Asp	Ala	Trp	Leu	Ser	Gln	Phe	Cys	Leu	Glu	Glu	Lys	Lys
145				150						155				160	
Gly	Glu	Ile	Ser	Glu	Leu	Leu	Val	Gly	Ser	Pro	Ser	Ile	Arg	Ala	Leu
			165					170					175		
Tyr	Thr	Lys	Met	Val	Pro	Ala	Ala	Val	Ser	His	Ser	Glu	Phe	Trp	His
		180						185					190		
Arg	Tyr	Phe	Tyr	Lys	Val	His	Gln	Leu	Glu	Gln	Glu	Gln	Ala	Arg	Arg

195	200	205
Asp Ala Leu Lys Gln Arg	Ala Glu Gln Ser Ile Ser	Glu Glu Pro Gly
210	215	220
Trp Glu Glu Glu Glu Glu	Glu Leu Met Gly Ile Ser	Pro Ile Ser Pro
225	230	235
Lys Glu Ala Lys Val Pro	Val Ala Lys Ile Ser Thr	Phe Pro Glu Gly
245	250	255
Glu Pro Gly Pro Gln Ser	Pro Cys Glu Asn Leu Val	Thr Ser Val
260	265	270
Glu Pro Pro Ala Glu Val	Thr Pro Ser Glu Ser Ser	Glu Ser Ile Ser
275	280	285
Leu Val Thr Gln Ile Ala	Asn Pro Ala Thr Ala	Pro Glu Ala Arg Val
290	295	300
Leu Pro Lys Asp Leu Ser	Gln Lys Leu Leu Glu Ala	Ser Leu Glu Glu
305	310	315
Gln Gly Leu Ala Val Asp	Val Gly Glu Thr Gly	Pro Ser Pro Pro Ile
325	330	335
His Ser Lys Pro Leu Thr	Pro Ala Gly His Thr	Gly Gly Pro Glu Pro
340	345	350
Arg Pro Pro Ala Arg Val	Glu Thr Leu Arg Glu	Glu Ala Pro Thr Asp
355	360	365
Leu Arg Val Phe Glu Leu	Asn Ser Asp Ser Gly	Lys Ser Thr Pro Ser
370	375	380
Asn Asn Gly Lys Lys Gly	Ser Ser Thr Asp Ile	Ser Glu Asp Trp Glu
385	390	395
Lys Asp Phe Asp Leu Asp	Met Thr Glu Glu Glu	Val Gln Met Ala Leu
405	410	415
Ser Lys Val Asp Ala Ser	Gly Glu Leu Lys Met	
420	425	

<210> 5471

<211> 534

<212> DNA

<213> Homo sapiens

<400> 5471

cggccgcccc gcgggggcgc agaaatagga ccgtcctggc agaggctgca gccgacccag
 60
 ctggccccac tacgcggggc ccagagccag ggtgggggat gcagagaccg ggcgtgcggg
 120
 ttgccagggtg tggcgacat gtgtgcccgt gggcagagta cagagacaca agcttggtgtg
 180
 gacacgaatg ttagctatg tgcgagtga cacggagtgg tgagtgcagg gacccagggc
 240
 cggcctgcgt cggcgcgcag ggcatatagg ggcgtgcacg cagtcttgga ggtgtgtgca
 300
 cagagccccc ggcacccgcg tgtgtgcaaa gacacaggaa cccgtctgcg tggcgctgtg
 360
 tgtgcaaccc aaggaggtgg gcgcttgac tccaaagtgt gcgcttatcc ggtgtggat
 420
 gtgggggcag ccggggacag ggctgggtgt gcgtgactcg ggtgtgccgg gacccacaga
 480
 gcatatgtgt ccatgcctgg tgctgtgact catgtcctg ggggtgggcac gcgt
 534

<210> 5472
 <211> 161
 <212> PRT
 <213> Homo sapiens

<400> 5472
 Met Leu Cys Gly Ser Arg His Thr Arg Val Thr His Thr Gln Pro Cys
 1 5 10 15
 Pro Arg Leu Pro Pro His Pro His Pro Asp Lys Arg Thr Leu Trp Ser
 20 25 30
 Pro Ser Ala His Leu Leu Gly Leu His Thr Gln Arg His Ala Asp Gly
 35 40 45
 Phe Leu Cys Leu Cys Thr His Ala Gly Ala Gly Gly Ser Val His Thr
 50 55 60
 Pro Pro Arg Leu Arg Ala Arg Pro Tyr Met Pro Cys Ala Pro Thr Gln
 65 70 75 80
 Ala Gly Leu Gly Ser Leu His Ser Pro Leu Arg Val His Ser His Ile
 85 90 95
 Ala Thr His Ser Cys Pro His Lys Leu Val Ser Leu Tyr Ser Ala His
 100 105 110
 Gly His Thr Cys Ala Pro His Leu Ala Thr Arg Thr Pro Gly Leu Cys
 115 120 125
 Ile Pro His Pro Gly Ser Gly Pro Arg Val Val Gly Pro Ala Gly Ser
 130 135 140
 Ala Ala Ala Ser Ala Arg Thr Val Leu Phe Leu Arg Pro Arg Gly Ala
 145 150 155 160
 Ala

<210> 5473
 <211> 691
 <212> DNA
 <213> Homo sapiens

<400> 5473
 gcgaccagca gcgctggtgg ccatgctctt ggacactacg gcctggcggg cagccctcgc
 60
 cgctgccgcg ccccgcgccc ccaggaggcc gcacctgcg ccagggcccg gagacagcaa
 120
 catctttctg ggctgcagg agacctgaca gatgccaaaa caaaggaaca gttgggatcc
 180
 aggcagcatg aggtagaatg gcaaacctac cagggtattc tgaagaagac aagagtcag
 240
 gaaaaaacca agtggctgga tatcaaagga aatcatgaaa aagatggagg agctcttatt
 300
 actggccaag gaaagcagtc ggagcaacca tacaatttgg tttggacact ttacaacatc
 360
 cactattctt tctccatcac caggaatccg gtcaataatg agttcggcta tagcttattt
 420
 gtgtggacat ctccatacac ttggtggact gatgcctggt ttgcacactc gtcaactcca
 480
 gggcactttg gaacttgagg tgggagactg gaaggataat aggaggtacc ggatttttgc
 540

ttttgatcac gacctcttta gctttgcaga ttgatcttt gggaagtggc ctgtggttct
 600
 tatcaccaat cctaaatcac tcctttatag ttgtggtgaa catgaaccac tagaaagact
 660
 tcttcactca acccacatta gattggtaac a
 691

<210> 5474

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5474

Met	Lys	Lys	Met	Glu	Glu	Leu	Leu	Leu	Leu	Ala	Lys	Glu	Ser	Ser	Arg
1				5						10				15	
Ser	Asn	His	Thr	Ile	Trp	Phe	Gly	His	Phe	Thr	Thr	Ser	Thr	Ile	Leu
			20					25					30		
Ser	Pro	Ser	Pro	Gly	Ile	Arg	Ser	Ile	Met	Ser	Ser	Ala	Ile	Ala	Tyr
			35					40				45			
Leu	Cys	Gly	His	Leu	His	Thr	Leu	Gly	Gly	Leu	Met	Pro	Val	Leu	His
	50					55					60				
Thr	Arg	His	Phe	Gln	Gly	Thr	Leu	Glu	Leu	Glu	Val	Gly	Asp	Trp	Lys
65					70					75					80
Asp	Asn	Arg	Arg	Tyr	Arg	Ile	Phe	Ala	Phe	Asp	His	Asp	Leu	Phe	Ser
				85					90					95	
Phe	Ala	Asp	Leu	Ile	Phe	Gly	Lys	Trp	Pro	Val	Val	Leu	Ile	Thr	Asn
			100					105					110		
Pro	Lys	Ser	Leu	Leu	Tyr	Ser	Cys	Gly	Glu	His	Glu	Pro	Leu	Glu	Arg
			115				120						125		
Leu	Leu	His	Ser	Thr	His	Ile	Arg	Leu	Val	Thr					
			130				135								

<210> 5475

<211> 628

<212> DNA

<213> Homo sapiens

<400> 5475

ggcacacacg aaacagcctt cctgggaccc aaggacctgt tcccctacga caaatgtaaa
 60
 gacaagtacg ggaagcccaa caagaggaaa ggcttcaatg aagggtctgtg ggagatccag
 120
 aacaaccccc acgccagcta cagcgccctt ccgccagtga gtcctccga cagcgaggcc
 180
 cccgaggcca accccgccga cggcagtgac gctgacgagg acgatgagga ccgggggggtc
 240
 atggccgtca cagcggtaac cgccacagct gccagcgaca ggatggagag cgactcagac
 300
 tcagacaaga gtagcgacaa cagtggcctg aagaggaaga cgcctgcgct aaagatgtcg
 360
 gtctcgaaac gagcccgaaa ggcctccagc gacctggatc aggccagcgt gtcccatcc
 420
 gaagaggaga actcggaaag ctcactctgag tcggagaaga ccagcgacca ggacttcaca
 480

cctgagaaga aagcagcggg cggggcgcca cggagggggcc ctctggggggg acggaaaaaa
 540
 aagaaggcgc cgtcagcctc cgactccgac tccaaggccg attcggacgg ggccaagcct
 600
 gagccggtgg ccatggcgcg gtcggcgt
 628

<210> 5476
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 5476
 Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro Tyr
 1 5 10 15
 Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys Gly Phe
 20 25 30
 Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Pro His Ala Ser Tyr Ser
 35 40 45
 Ala Pro Pro Pro Val Ser Ser Asp Ser Glu Ala Pro Glu Ala Asn
 50 55 60
 Pro Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp Glu Asp Arg Gly Val
 65 70 75 80
 Met Ala Val Thr Ala Val Thr Ala Thr Ala Ala Ser Asp Arg Met Glu
 85 90 95
 Ser Asp Ser Asp Ser Asp Lys Ser Ser Asp Asn Ser Gly Leu Lys Arg
 100 105 110
 Lys Thr Pro Ala Leu Lys Met Ser Val Ser Lys Arg Ala Arg Lys Ala
 115 120 125
 Ser Ser Asp Leu Asp Gln Ala Ser Val Ser Pro Ser Glu Glu Glu Asn
 130 135 140
 Ser Glu Ser Ser Ser Glu Ser Glu Lys Thr Ser Asp Gln Asp Phe Thr
 145 150 155 160
 Pro Glu Lys Lys Ala Ala Val Arg Ala Pro Arg Arg Gly Pro Leu Gly
 165 170 175
 Gly Arg Lys Lys Lys Lys Ala Pro Ser Ala Ser Asp Ser Asp Ser Lys
 180 185 190
 Ala Asp Ser Asp Gly Ala Lys Pro Glu Pro Val Ala Met Ala Arg Ser
 195 200 205
 Ala

<210> 5477
 <211> 727
 <212> DNA
 <213> Homo sapiens

<400> 5477
 tttttgttta gtgtttcctt tattataaag cactgaaata agttaaataa acaggtggga
 60
 ggctgggcag tccccagcc ggtttgtcca cagcccctgg gggcagtgga ggtgaatata
 120
 gggcccttct cactgagctc gtgaagtgcc tcagtcaagg caaggtcccc tggccatat
 180

gggccccccc gcccatgggg ttgggctggt ccttatagtg cctacgttag tctgtgtgga
 240
 gcccttgccc agcgggggag aaaaagggtgg cttctgggtcc gtctgtataa aacatggccc
 300
 ctcacctgtc ggccccccac acagctggca ggctgggctg gcctctcacc cctggcctcc
 360
 cctggacccc tggttggtc ctcaacttca ctctccgcac ttagtgcccc gccgccccca
 420
 gactcatcgt cgctcagccc atagggaagc ccaggcctgg cccccagaga gtctccttcc
 480
 gagtctctct cgaagcccat gagctgggtca ctgttgccgt cgcttctctc ctcttctctt
 540
 tctctctcaa actccagatc ctggcctagt agcaaatac tctccaatac caggggcccc
 600
 ggtccttcgt cgaggggagtc ttcagtatcc actttgaccc cctcgcatctt cacgggctgc
 660
 ggggtggcttt gcttctctcg ggcatcgtg accggctcca gcccgacgag cctccggcct
 720
 gcggcgcg
 727

<210> 5478

<211> 99

<212> PRT

<213> Homo sapiens

<400> 5478

Ser	Ala	Ser	Val	Lys	Ala	Arg	Ser	Pro	Gly	Pro	Tyr	Gly	Pro	Pro	Arg
1				5					10					15	
Pro	Trp	Gly	Trp	Ala	Gly	Pro	Tyr	Ser	Ala	Tyr	Val	Ser	Leu	Cys	Gly
		20						25					30		
Ala	Pro	Gly	Gln	Arg	Gly	Arg	Lys	Arg	Trp	Leu	Leu	Val	Arg	Leu	Tyr
		35				40						45			
Lys	Thr	Trp	Pro	Leu	Thr	Cys	Arg	Pro	Pro	Thr	Gln	Leu	Ala	Gly	Trp
	50					55				60					
Ala	Gly	Leu	Ser	Pro	Leu	Ala	Ser	Pro	Gly	Pro	Leu	Ala	Gly	Ser	Ser
65				70					75					80	
Thr	Ser	Leu	Ser	Ala	Leu	Ser	Ala	Arg	Pro	Pro	Pro	Asp	Ser	Ser	Ser
			85					90					95		

Leu Ser Pro

<210> 5479

<211> 1386

<212> DNA

<213> Homo sapiens

<400> 5479

gccggcacca cagaccgaga agaagccact cggctcttgg ctgagaagcg gcgccaggcc
 60
 cgggagcagc gggagcgcga ggagcaggag cggaggctgc aggcagaaag ggacaagcga
 120
 atgcgagagg agcagctggc acgggaggcc gagggccggg cggagcggga ggcggaggcc
 180

cggaggcggg aggagcagga ggcacgagag aaggcgcagg ccgagcagga ggagcaggag
 240
 cggctgcaga agcagaaaga ggaggccgaa gctcggtcgc gggagaggc ggagcggcag
 300
 cgtctggagc gggaaaagca cttccagcag caggagcaag agcggcaaga gcgcagaaag
 360
 cgtctggagg agatcatgaa gaggactcgg aagtcagaag tttctgaaac caagcagaag
 420
 caggacagca aggaggccaa cgccaacggt tccagcccag agcctgtgaa agctgtggag
 480
 gctcgggtccc cagggtgca gaaggaggct gtgcagaaag aggagcccat cccacaggag
 540
 cctcagtga gtctcccaag caaggagttg ccagcgtccc tggatgaatgg cctgcagcct
 600
 ctcccagcac accaggagaa tggcttctcc accaacggac cctctgggga caagagtctg
 660
 agccgaacac cagagacact cctgcccttt gcagaggcag aagccttcct caagaaagct
 720
 gtggtgcagt ccccgaggt cacagaagtc ctttaagagg gtttgccttg gatccgggca
 780
 cagttgtgag ggctcctctg catcacctac caggatgtct ggaggagaaa aagacagaac
 840
 aaagatggaa gtggcctggg cccctggggg tgggtcctct ctgttgtttt taatctgcac
 900
 cttatagact gatgtctctt tggccggagc cagatctgcc cctcagtga ttcgtgtgct
 960
 cgcacgcgca gacatccctt ctccccata cacacatata cactcacagc ctctctggcc
 1020
 tcttccttg gggaggggac acctgtagta tttgccttga tttggtggg tacagtggat
 1080
 gtgaatactg taaatagctt gtgctcagac tcctctgcgt ggagagggg ggtgcaggag
 1140
 gcagaccctc cccccaaagc cccctgggga gatcttcctc tctctattta actgtaactg
 1200
 agggggatcc caggctctggg gatgggggac accttgggac acaggatact ggttgcttca
 1260
 ggggtaccca tgccccctgc cctcgctgg aatcagtgtt actgcatctg attaaatgtc
 1320
 tccagaaata aagaataatt ctgccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1380
 aaaaaa
 1386

<210> 5480

<211> 251

<212> PRT

<213> Homo sapiens

<400> 5480

Ala	Gly	Thr	Thr	Asp	Arg	Glu	Glu	Ala	Thr	Arg	Leu	Leu	Ala	Glu	Lys
1				5				10						15	
Arg	Arg	Gln	Ala	Arg	Glu	Gln	Arg	Glu	Arg	Glu	Glu	Gln	Glu	Arg	Arg
			20				25					30			
Leu	Gln	Ala	Glu	Arg	Asp	Lys	Arg	Met	Arg	Glu	Glu	Gln	Leu	Ala	Arg


```

      35      40      45
Glu Ala Glu Ala Arg Ala Glu Arg Glu Ala Glu Ala Arg Arg Arg Glu
  50      55      60
Glu Gln Glu Ala Arg Glu Lys Ala Gln Ala Glu Gln Glu Glu Gln Glu
  65      70      75      80
Arg Leu Gln Lys Gln Lys Glu Glu Ala Glu Ala Arg Ser Arg Glu Glu
      85      90      95
Ala Glu Arg Gln Arg Leu Glu Arg Glu Lys His Phe Gln Gln Gln Glu
      100      105      110
Gln Glu Arg Gln Glu Arg Arg Lys Arg Leu Glu Glu Ile Met Lys Arg
      115      120      125
Thr Arg Lys Ser Glu Val Ser Glu Thr Lys Gln Lys Gln Asp Ser Lys
      130      135      140
Glu Ala Asn Ala Asn Gly Ser Ser Pro Glu Pro Val Lys Ala Val Glu
  145      150      155      160
Ala Arg Ser Pro Gly Leu Gln Lys Glu Ala Val Gln Lys Glu Glu Pro
      165      170      175
Ile Pro Gln Glu Pro Gln Trp Ser Leu Pro Ser Lys Glu Leu Pro Ala
      180      185      190
Ser Leu Val Asn Gly Leu Gln Pro Leu Pro Ala His Gln Glu Asn Gly
      195      200      205
Phe Ser Thr Asn Gly Pro Ser Gly Asp Lys Ser Leu Ser Arg Thr Pro
      210      215      220
Glu Thr Leu Leu Pro Phe Ala Glu Ala Glu Phe Leu Lys Lys Ala
  225      230      235      240
Val Val Gln Ser Pro Gln Val Thr Glu Val Leu
      245      250

```

<210> 5481
 <211> 1513
 <212> DNA
 <213> Homo sapiens

```

<400> 5481
tgtccaatga ggagccagcg ccggattgct tcaggacaga ctatttctga gtctcggcgg
  60
aaggcggagg gaaggccgtg gggatggcca atcaaagggg gcgactcagg tcggtgggga
  120
ccggcagcca atcaggagag cgctcgctcc tgactcgacc ggcccacgct tcccgccagt
  180
cccctaaccg tgaggctgcc gcgcggcggt cactgcgccg gggtagtggg cccagtggtt
  240
gcgctctctg gccgttcctt acactttgct tcagggtcca gtgcaggggc gtagtgggat
  300
atggccaact cgggctgcaa ggacgtcacg ggtccagatg aggagagttt tctgtacttt
  360
gcctacggca gcaacctgct gacagagagg atccacctcc gaaacccctc ggcggcgttc
  420
ttctgtgtgg cccgcctgca ggattttaag cttgactttg gcaattccca aggcaaaaca
  480
agtcaaactt ggcatggagg gatagccacc atttttcaga gtcctggcga tgaattgtgg
  540
ggagtagtat ggaaaatgaa caaaagcaat ttaaattctc tggatgagca agaaggggtt
  600

```

aaaagtggaa tgtatgttgt aatagaagtt aaagttgcaa ctcaagaagg aaaagaaata
 660
 acctgtcgaa gttatctgat gacaaattac gaaagtgttc ccccatcccc acagtataaa
 720
 aagattatatt gcatgggtgc aaaagaaaat ggtttgccgc tggagtatca agagaagtta
 780
 aaagcaatag aaccaaata ga ctatacagga aaggtctcag aagaaattga agacatcatc
 840
 aaaaaggggg aaacacaaac tctttagaac ataacagaat atatctaagg gtattctatg
 900
 tgctaataata aaatattttt aacacttgag aacagggatc tgggggatct ccacgtttga
 960
 tccattttca gcagtgtctt gaaggagtat cttacttggg tgattccttg tttttagact
 1020
 ataaaaagaa actgggatag gagttagaca atttaaaagg ggtgtatgag ggcctgaaat
 1080
 atgtgacaaa tgaatgtgag tacccttctt gtgaacactg aaagctattc tcttgaattg
 1140
 atcttaagtg tctccttgct ctggtaaaag atagatttgt agctcacttg atgatggtgc
 1200
 tgggtgaattg ctctgctctg tctgagattt ttaaaaatca gcttaatgag agtaatctgc
 1260
 agacaattga taataacatt ttgaaaattg gaaagatggg atactgtttt tagaggaata
 1320
 aacgtatttg tggtttaaaa aaaaaagagc aacttccttt gcactgtata cccttttgta
 1380
 ttattaggat ttatactat gtttatatgt tgcctattta ataaatcgct taaagttata
 1440
 tatcttgaat atctttccat aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1500
 aaaaaaaaaa aaa
 1513

<210> 5482

<211> 188

<212> PRT

<213> Homo sapiens

<400> 5482

Met	Ala	Asn	Ser	Gly	Cys	Lys	Asp	Val	Thr	Gly	Pro	Asp	Glu	Glu	Ser
1				5					10					15	
Phe	Leu	Tyr	Phe	Ala	Tyr	Gly	Ser	Asn	Leu	Leu	Thr	Glu	Arg	Ile	His
			20					25					30		
Leu	Arg	Asn	Pro	Ser	Ala	Ala	Phe	Phe	Cys	Val	Ala	Arg	Leu	Gln	Asp
		35				40						45			
Phe	Lys	Leu	Asp	Phe	Gly	Asn	Ser	Gln	Gly	Lys	Thr	Ser	Gln	Thr	Trp
	50					55					60				
His	Gly	Gly	Ile	Ala	Thr	Ile	Phe	Gln	Ser	Pro	Gly	Asp	Glu	Leu	Trp
65					70				75					80	
Gly	Val	Val	Trp	Lys	Met	Asn	Lys	Ser	Asn	Leu	Asn	Ser	Leu	Asp	Glu
				85				90						95	
Gln	Glu	Gly	Val	Lys	Ser	Gly	Met	Tyr	Val	Val	Ile	Glu	Val	Lys	Val
			100					105					110		
Ala	Thr	Gln	Glu	Gly	Lys	Glu	Ile	Thr	Cys	Arg	Ser	Tyr	Leu	Met	Thr

115	120	125
Asn Tyr Glu Ser Ala Pro Pro Ser Pro Gln Tyr Lys Lys Ile Ile Cys		
130	135	140
Met Gly Ala Lys Glu Asn Gly Leu Pro Leu Glu Tyr Gln Glu Lys Leu		
145	150	155
Lys Ala Ile Glu Pro Asn Asp Tyr Thr Gly Lys Val Ser Glu Glu Ile		160
	165	170
Glu Asp Ile Ile Lys Lys Gly Glu Thr Gln Thr Leu		175
180	185	

<210> 5483

<211> 1552

<212> DNA

<213> Homo sapiens

<400> 5483

```

actttcctcg acagccactg tgaggtgaac agggactggc tccagcctct nttngacagg
60
gtcaaagagg actacacgcg ggtggtgtgc cctgtgatcg atatcattaa cctggacacc
120
ttcacctaca tcgagtctgc ctcgagctc agaggggggt ttgactggag cctccacttc
180
cagtgggagc agctctcccc agagcagaag gctcggcgcc tggacccac ggagcccatc
240
aggactccta tcatagctgg agggctcttc gtgatcgaca aagcttggtt tgattacctg
300
gggaaatatg atatggacat ggacatctgg ggtggggaga actttgaaat ctccttccga
360
gtgtggatgt gcgggggcag cctagagatc gtcccctgca gccgagtggg gcacgtcttc
420
cggaagaagc acccctacgt tttccctgat ggaaatgcca acacgtatat aaagaacacc
480
aagcggacag ctgaagtgtg gatggatgaa tacaagcaat actattacgc tgcccggcca
540
ttcgccctgg agaggccctt cggaatggt gagagcagat tggacctgag gaagaatctg
600
cgctgccaga gcttcaagtg gtacctggag aatatctacc ctgaactcag catccccaag
660
gagttctcca tccagaaggg caatatccga cagagacaga agtgcttggg atctcaaagg
720
cagaacaacc aagaaacccc aaacctaaag ttgagcccct gtgccaaggt caaaggcgaa
780
gatgcaaagt cccaggtatg ggccttcaca tacaccaga agatcctcca ggaggagctg
840
tgctgtcag tcatcacctt gttccctggc gcccagtggt ttcttgtcct ttgcaagaat
900
ggagatgacc gacagcaatg gacaaaaact ggttcccaca tcgagcacat agcatccac
960
ctctgcctcg atacagatat gttcgggtgat ggcaccgaga acggcaagga aatcgtcgtc
1020
aacccatgtg agtctcact catgagccag cactgggaca tggtagctc ttgaggaccc
1080
ctgccagaag cagcaagggc catgggggtg tgcttccttg gaccagaaca gactggaaac
1140

```

tgggcagcaa gcagcctgca accacctcag acatcctgga ctgggaggtg gaggcagagc
 1200
 cccccaggac aggagcaact gtctcagggg ggacagagga aaacatcaca agccaatggg
 1260
 gctcaaagac aaatcccaca tgttctcaag gccgttaagt tccagtccctg gccagtcatt
 1320
 ccctgattgg tatctggaga cagaaaccta atggggaagtg tttattgttc cttttcctac
 1380
 aaaggaagca gtctctggag gccagaaaga aaagccttct ttttcactag gccaggacta
 1440
 cattgagaga tgaagaatgg aggttggttc caaaagaaat aaagagaaac ttagaagttg
 1500
 tctctggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1552

<210> 5484
 <211> 357
 <212> PRT
 <213> Homo sapiens

<400> 5484
 Thr Phe Leu Asp Ser His Cys Glu Val Asn Arg Asp Trp Leu Gln Pro
 1 5 10 15
 Leu Xaa Asp Arg Val Lys Glu Asp Tyr Thr Arg Val Val Cys Pro Val
 20 25 30
 Ile Asp Ile Ile Asn Leu Asp Thr Phe Thr Tyr Ile Glu Ser Ala Ser
 35 40 45
 Glu Leu Arg Gly Gly Phe Asp Trp Ser Leu His Phe Gln Trp Glu Gln
 50 55 60
 Leu Ser Pro Glu Gln Lys Ala Arg Arg Leu Asp Pro Thr Glu Pro Ile
 65 70 75 80
 Arg Thr Pro Ile Ile Ala Gly Gly Leu Phe Val Ile Asp Lys Ala Trp
 85 90 95
 Phe Asp Tyr Leu Gly Lys Tyr Asp Met Asp Met Asp Ile Trp Gly Gly
 100 105 110
 Glu Asn Phe Glu Ile Ser Phe Arg Val Trp Met Cys Gly Gly Ser Leu
 115 120 125
 Glu Ile Val Pro Cys Ser Arg Val Gly His Val Phe Arg Lys Lys His
 130 135 140
 Pro Tyr Val Phe Pro Asp Gly Asn Ala Asn Thr Tyr Ile Lys Asn Thr
 145 150 155 160
 Lys Arg Thr Ala Glu Val Trp Met Asp Glu Tyr Lys Gln Tyr Tyr Tyr
 165 170 175
 Ala Ala Arg Pro Phe Ala Leu Glu Arg Pro Phe Gly Asn Val Glu Ser
 180 185 190
 Arg Leu Asp Leu Arg Lys Asn Leu Arg Cys Gln Ser Phe Lys Trp Tyr
 195 200 205
 Leu Glu Asn Ile Tyr Pro Glu Leu Ser Ile Pro Lys Glu Phe Ser Ile
 210 215 220
 Gln Lys Gly Asn Ile Arg Gln Arg Gln Lys Cys Leu Glu Ser Gln Arg
 225 230 235 240
 Gln Asn Asn Gln Glu Thr Pro Asn Leu Lys Leu Ser Pro Cys Ala Lys
 245 250 255
 Val Lys Gly Glu Asp Ala Lys Ser Gln Val Trp Ala Phe Thr Tyr Thr

	260		265		270
Gln Lys Ile Leu Gln Glu Glu Leu Cys Leu Ser Val Ile Thr Leu Phe					
	275		280		285
Pro Gly Ala Pro Val Val Leu Val Leu Cys Lys Asn Gly Asp Asp Arg					
	290		295		300
Gln Gln Trp Thr Lys Thr Gly Ser His Ile Glu His Ile Ala Ser His					
305		310		315	320
Leu Cys Leu Asp Thr Asp Met Phe Gly Asp Gly Thr Glu Asn Gly Lys					
	325		330		335
Glu Ile Val Val Asn Pro Cys Glu Ser Ser Leu Met Ser Gln His Trp					
	340		345		350
Asp Met Val Ser Ser					
	355				

<210> 5485

<211> 1549

<212> DNA

<213> Homo sapiens

<400> 5485

nacgcgtgaa gggcggtacgc gatcgcgcgg ggacagcgct actgcggctt tggtcgcaca
 60
 gtgtacccgg aggagcacag cagatggagg gacagctcca ggacgagggt gtggaattcg
 120
 ccgttcgaaa gcagggacta aaagccccac ttcgtcttac gttccgaaag gaaggcgtct
 180
 gttgagcctt tctctcagtc gtgaggagg cgctcgacggc gtgcggaagt cctgagttga
 240
 ggcttgccgg atcctttccg gagaaagcgc aggctaaagc cgcagggtgaa gatgtccaac
 300
 tacgtgaacg acatgtggcc gggctcgccg caggagaagg attcgccctc gacctcgcg
 360
 tcgggcgggt ccagccggct gtcgtcgcg tctaggagcc gctctttttc cagaagctct
 420
 cggteccatt cccgcgtctc gagccggttt tcgtccagga gtcggaggag caagtccagg
 480
 tcccgttccc gaaggcgcca ccagcggaag tacaggcgct actcgcggtc atactcgcg
 540
 agccggtcgc gatcccgag ccgccgttac cgagagaggc gctacgggtt caccaggaga
 600
 tactaccggt ctcttcgcg gtaccggtcc cggccccgta gcaggtcgcg ctctcgggga
 660
 aggtcgtact gcggaagggc gtacgcgac gcgcggggac agcgctacta cggctttggt
 720
 cgcacagtgt acccgaggga gcacagcaga tggagggaca gatccaggac gaggtcgcg
 780
 agcagaaccc cttttcgctt aagtgaacaa gatcgaatgg agctgttaga aatagcaaaa
 840
 accaatgcag cgaaagctct aggaacaacc aacattgact tgccagctag tctcagaact
 900
 gttccttcag ccaaagaaac aagccgtgga ataggtgtat caagtaatgg tgcaaagcct
 960
 gaactgtcgg aaaaggtaac agaagatgga actcgaaatc ccaatgaaaa acctaccag
 1020

caaagaagca tagcttttag ctctaataat tctgtagcaa agccaataca aaaatcagct
 1080
 aaagctgccca cagaagaggc atcttcaaga tcaccaaaaa tagatcagaa aaaaagtcca
 1140
 tatggactgt ggatacctat ctaaaagaag aaaactgatg gctaagtttg catgaaaact
 1200
 gcactttatt gcaagttagt gtttctagca ttatcccatc cctttgagcc attcaggggt
 1260
 acttgtgcat ttaaaaacca acacaaaaag atgtaaatac ttaacactca aatattaaca
 1320
 ttttaggttt ctcttgacaga tatgagagat agcacagatg gaccaaaggt tatgcacagg
 1380
 tgggagtctt ttgtatatag ttgtaaatat tgtcttggtt atgtaaaaat gaaatttttt
 1440
 agacacagta attgaactgt attcctgttt tgtatattta ataaatttct tgttttcatt
 1500
 cttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaga
 1549

<210> 5486

<211> 290

<212> PRT

<213> Homo sapiens

<400> 5486

Met	Ser	Asn	Tyr	Val	Asn	Asp	Met	Trp	Pro	Gly	Ser	Pro	Gln	Glu	Lys
1				5					10					15	
Asp	Ser	Pro	Ser	Thr	Ser	Arg	Ser	Gly	Gly	Ser	Ser	Arg	Leu	Ser	Ser
			20					25					30		
Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Ser	Arg	Ser	His	Ser	Arg
			35				40					45			
Val	Ser	Ser	Arg	Phe	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Lys	Ser	Arg	Ser
	50				55						60				
Arg	Ser	Arg	Arg	Arg	His	Gln	Arg	Lys	Tyr	Arg	Arg	Tyr	Ser	Arg	Ser
65					70					75				80	
Tyr	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Tyr	Arg	Glu	Arg
			85					90						95	
Arg	Tyr	Gly	Phe	Thr	Arg	Arg	Tyr	Tyr	Arg	Ser	Pro	Ser	Arg	Tyr	Arg
			100					105					110		
Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Ser	Tyr	Cys	Gly
			115				120					125			
Arg	Ala	Tyr	Ala	Ile	Ala	Arg	Gly	Gln	Arg	Tyr	Tyr	Gly	Phe	Gly	Arg
	130				135						140				
Thr	Val	Tyr	Pro	Glu	Glu	His	Ser	Arg	Trp	Arg	Asp	Arg	Ser	Arg	Thr
145					150					155				160	
Arg	Ser	Arg	Ser	Arg	Thr	Pro	Phe	Arg	Leu	Ser	Glu	Lys	Asp	Arg	Met
			165					170						175	
Glu	Leu	Leu	Glu	Ile	Ala	Lys	Thr	Asn	Ala	Ala	Lys	Ala	Leu	Gly	Thr
			180				185						190		
Thr	Asn	Ile	Asp	Leu	Pro	Ala	Ser	Leu	Arg	Thr	Val	Pro	Ser	Ala	Lys
	195						200					205			
Glu	Thr	Ser	Arg	Gly	Ile	Gly	Val	Ser	Ser	Asn	Gly	Ala	Lys	Pro	Glu
	210				215						220				
Leu	Ser	Glu	Lys	Val	Thr	Glu	Asp	Gly	Thr	Arg	Asn	Pro	Asn	Glu	Lys

[illegible]

```
<210> 5487
<211> 1716
<212> DNA
<213> Homo sapiens
```

```

<400> 5487
acgccaccgg gtcggaggac tacgagaacc tgccgactag cgcctccgtg tccacccaca
60
tgacagcagg agcgatggcc gggatcctgg agcactcggg catgtaccgg gtggactcgg
120
tgaagagaca ggggtcttggc ttgtcgcccta ggctggagtg cagtgttgag atcatagttt
180
actgcagcct cgaactcctg ggtacaagga atcctccctc ctcagcctcc tgagtagctg
240
ggattacaga cacgaatgca gagtttgagt ccagatccca aagcccagta cacaagtatc
300
tacggagccc tcaagaaaat catgcgagcc gaagggttct ggaggccctt gcgaggcgtc
360
aacgtcatga tcatgggtgc agggccagcc catgccatgt attttgctg ctatgaaaac
420
atgaaaagga ctttaaata cgttttccac caccaaggaa acagccacct agccaacggg
480
atagctggga gtatggccac cctgctccac gatgcggtaa tgaatccagc agaagtggg
540
aagcagcgct tgcagatgta caactcgag caccggctag caatcagctg catccggacg
600
gtgtggagga ccgaggggtt gggggccttc taccggagct acaccacgca gctgaccatg
660
aacatccct tccagtccat ccacttcac acctatgagt tcctgcagga gcaggtaaac
720
ccccacgga cctacaacct gcagtccac atcatctcag gcgggctggc cggggccctc
780
gccgcggccg ccacgacccc cctggacgtc tgtaagacce ttctgaacac tcaggagaac
840
gtggccctct cgctggccaa catcagcggc cggctgtcgg gtatggccaa tgccttcgg
900
acggtgtacc agctcaacgg cctggccggc tacttcaaag gcattccagg gcgtgtcatc
960
taccagatgc cctccaccgc catttcttgg tctgtctatg agttcttcaa gtactttctc
1020
accaagcgcc agctggaaaa tcgagctcca tactaaagga agggatcata gaatcttttc
1080
ttaagtcatt tctctgcctg catccagccc cttgccctct cctcacacgt agatcatttt
1140

```

ttttttttgc aggggtgctgc ctatgggccc. tctgctcccc aatgccttag agagaggagg
 1200
 ggacgggacg gcacggccgc tcaccggaag gctgtgtgcg gggacatccg aggtgggtggt
 1260
 ggacaggaag gacttgggaa ggggagcgag aaattgcttt ttctcttctt ccttgggcag
 1320
 aatgtagctt ttctgttca ctgtggcagc ctctccctg gatccttaga tcccagagga
 1380
 gggaagaaaa tttgcagtga ctgaaaacag taaaaaaaaa aaaatttatg tatataaaag
 1440
 ttgcattaca cagtacaaaa tagatggata atgtttatcc tttatttttc tatgtagaag
 1500
 tttttgaatt tgtgtgtgtg cttgtgctg tctacaccta gtattacggc tgggactctc
 1560
 cagctgtttt tgttgtgtt atgtttttaa gagggttgaa ttcttccatc aggtgaacga
 1620
 aaaaggcaac aaagtaataa atcagtgaat gtggccggca gctgtgttta gccctccag
 1680
 atggaagttt cacttgaatg taaaataata aagttt
 1716

<210> 5488

<211> 272

<212> PRT

<213> Homo sapiens

<400> 5488

Leu	Gly	Leu	Gln	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro	Lys	Ala
1				5					10					15	
Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Arg	Thr	Glu
		20						25					30		
Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met	Gly	Ala
		35					40					45			
Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met	Lys	Arg
	50					55					60				
Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu	Ala	Asn
65					70					75				80	
Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu	Leu	His	Asp	Ala	Val	Met	Asn
			85						90					95	
Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu	Gln	Met	Tyr	Asn	Ser	Gln	His
			100					105					110		
Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr	Val	Trp	Arg	Thr	Glu	Gly	Leu
	115						120						125		
Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr	Gln	Leu	Thr	Met	Asn	Ile	Pro
	130					135					140				
Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr	Glu	Phe	Leu	Gln	Glu	Gln	Val
145					150					155					160
Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln	Ser	His	Ile	Ile	Ser	Gly	Gly
			165						170					175	
Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	Ala	Thr	Thr	Pro	Leu	Asp	Val	Cys
		180						185					190		
Lys	Thr	Leu	Leu	Asn	Thr	Gln	Glu	Asn	Val	Ala	Leu	Ser	Leu	Ala	Asn
		195					200					205			
Ile	Ser	Gly	Arg	Leu	Ser	Gly	Met	Ala	Asn	Ala	Phe	Arg	Thr	Val	Tyr

210		215		220	
Gln Leu Asn Gly Leu Ala Gly Tyr Phe Lys Gly Ile Gln Ala Arg Val					
225		230		235	240
Ile Tyr Gln Met Pro Ser Thr Ala Ile Ser Trp Ser Val Tyr Glu Phe					
	245		250		255
Phe Lys Tyr Phe Leu Thr Lys Arg Gln Leu Glu Asn Arg Ala Pro Tyr					
260		265		270	

<210> 5489

<211> 1600

<212> DNA

<213> Homo sapiens

<400> 5489

```

aaatttccgg ctcaactcag gcattctccag gtgggtcatgg atttgggtcca tgagcttctt
60
cagcaagtcc ccaaacggat cctgggtgctg cctgtggcag aggttggtact gtttgcaagg
120
ctgttggtctg tgctcctgca gctgggggca gcagttctgg ggtgacatga tgcaccacgt
180
gtccaaattg gcacagagct gcaggacgtg gttgatggcc ccatcgagtt tggaggccca
240
gagaatccaa aactggagat gctggaaaag atcctgcaaa ggcagttcag tagctctaac
300
agccctcggg gtatcatctt caccgcacc cgccaaagcg cacactccct cctgctctgg
360
ctccagcagc agcagggcct gcagactgtg gacatccggg cccagctact gattggggct
420
gggaacagca gccagagcac ccacatgacc cagagggacc agcaagaagt gatccagaag
480
ttccaagatg gaaccctgaa ctttctggtg gccacgagtg tggcggagga ggggctggac
540
atccacatt gcaatgtggt ggtgcgttat gggctcttga ccaatgaaat ctccatggtc
600
caggccaggg gccgtgcccg ggccgatcag agtgtatacg cgtttgtagc aactgaaggt
660
agccgggagc tgaagcggga gctgatcaac gaggcgctgg agacgctgat ggagcaggca
720
gtggctgctg tgcagaaaat ggaccaggcc gactaccagg ccaagatccg ggatctgcag
780
caggcagcct tgaccaagcg ggcggcccag gcagcccagc gggagaacca gcggcagcag
840
ttccagtgag agcacgtgca gctactctgc atcaactgca tgggtggctgt gggccatggc
900
agcgacctgc ggaaggtgga gggcaccac catgtcaatg tgaaccccaa cttctcgaac
960
tactataatg tctccaggga tctgtggtc atcaacaaag tcttcaagga ctggaagcct
1020
gggggtgtca tcagctgcag gaactgtggg gaggtctggg gtctgcagat gatctacaag
1080
tcagtgaagc tgccagtgtc caaagtcgc agcatgctgc tggagacccc tcaggggcgg
1140
atccaggcca aaaagtggtc ccgctgccc ttctccgtgc ctgactttga cttcctgcag
1200

```

cattgtgccg agaacttgtc ggacctctcc ctggactgac cacctcattg ctgcagtgcc
 1260
 cgggtttgggc tgtagggggc gggagagtct gcagcagact ccaggcccct ccttcttgaa
 1320
 tcatcagctg tgggcatcag gcccaccagc cacacaggag tcctgggcac cctggcttag
 1380
 gctcccgcga tgggaaaaca accggagggc cagagcttag tccagaccta ccttgtaggc
 1440
 acatagacat tttcatatgc actggatgga gttagggaaa ctgaggcaaa agaatttgcc
 1500
 atactgtact cagaatcacg acattccttc cctaccaagg ccacttctat tttttgaggc
 1560
 tcctcataaa aataaatgaa aaaatgggat agaaaaaaaa
 1600

<210> 5490

<211> 357

<212> PRT

<213> Homo sapiens

<400> 5490

His Asp Ala Pro Arg Val Gln Ile Gly Thr Glu Leu Gln Asp Val Val
 1 5 10 15
 Asp Gly Pro Ile Glu Phe Gly Gly Pro Glu Asn Pro Lys Leu Glu Met
 20 25 30
 Leu Glu Lys Ile Leu Gln Arg Gln Phe Ser Ser Ser Asn Ser Pro Arg
 35 40 45
 Gly Ile Ile Phe Thr Arg Thr Arg Gln Ser Ala His Ser Leu Leu Leu
 50 55 60
 Trp Leu Gln Gln Gln Gln Gly Leu Gln Thr Val Asp Ile Arg Ala Gln
 65 70 75 80
 Leu Leu Ile Gly Ala Gly Asn Ser Ser Gln Ser Thr His Met Thr Gln
 85 90 95
 Arg Asp Gln Gln Glu Val Ile Gln Lys Phe Gln Asp Gly Thr Leu Asn
 100 105 110
 Leu Leu Val Ala Thr Ser Val Ala Glu Glu Gly Leu Asp Ile Pro His
 115 120 125
 Cys Asn Val Val Val Arg Tyr Gly Leu Leu Thr Asn Glu Ile Ser Met
 130 135 140
 Val Gln Ala Arg Gly Arg Ala Arg Ala Asp Gln Ser Val Tyr Ala Phe
 145 150 155 160
 Val Ala Thr Glu Gly Ser Arg Glu Leu Lys Arg Glu Leu Ile Asn Glu
 165 170 175
 Ala Leu Glu Thr Leu Met Glu Gln Ala Val Ala Val Gln Lys Met
 180 185 190
 Asp Gln Ala Glu Tyr Gln Ala Lys Ile Arg Asp Leu Gln Gln Ala Ala
 195 200 205
 Leu Thr Lys Arg Ala Ala Gln Ala Ala Gln Arg Glu Asn Gln Arg Gln
 210 215 220
 Gln Phe Pro Val Glu His Val Gln Leu Leu Cys Ile Asn Cys Met Val
 225 230 235 240
 Ala Val Gly His Gly Ser Asp Leu Arg Lys Val Glu Gly Thr His His
 245 250 255
 Val Asn Val Asn Pro Asn Phe Ser Asn Tyr Tyr Asn Val Ser Arg Asp

	260		265		270										
Pro	Val	Val	Ile	Asn	Lys	Val	Phe	Lys	Asp	Trp	Lys	Pro	Gly	Gly	Val
	275						280					285			
Ile	Ser	Cys	Arg	Asn	Cys	Gly	Glu	Val	Trp	Gly	Leu	Gln	Met	Ile	Tyr
	290					295					300				
Lys	Ser	Val	Lys	Leu	Pro	Val	Leu	Lys	Val	Arg	Ser	Met	Leu	Leu	Glu
305					310					315				320	
Thr	Pro	Gln	Gly	Arg	Ile	Gln	Ala	Lys	Lys	Trp	Ser	Arg	Val	Pro	Phe
			325						330				335		
Ser	Val	Pro	Asp	Phe	Asp	Phe	Leu	Gln	His	Cys	Ala	Glu	Asn	Leu	Ser
		340					345					350			
Asp	Leu	Ser	Leu	Asp											
	355														

<210> 5491

<211> 5555

<212> DNA

<213> Homo sapiens

<400> 5491

```

nntggcgagg cgggaagcac ccggaatctt cctggcccta gagcctgcag gctccaggcc
60
ggccccttga atctcaccgc gaggaaggca ccctgctgcc tgcacttatt tgcattcaag
120
agtttgcatt gagactggcg cttgcctact agggcagcca cagggggggt cccaggggac
180
agagattatg tctactttga gaattcctcc agcaacccat acctaataag aaggatagaa
240
gaactcaaca agactgcaag tggcaacgtg gaagcaaaag tagtatgctt ttatagacga
300
cgtgatattt ccaacacact tataatgctc gcagataagc atgctaaaga aattgaggaa
360
gaatctgaaa caacagttga ggctgacttg accgataagc agaaacatca gttgaaacat
420
agggaactct ttttgtcacg ccagtatgaa tctctgcccg caacacatat caggggaaag
480
tgagtggttg cccttctgaa tgagacagaa tcagtattgt catatcttga taaggaggat
540
accttcttct actcattggt ctatgacccc tcattgaaaa cactattagc tgacaaaggt
600
gaaatcagag tgggacctag atatcaagca gacattccag aaatgctgtt agaaggagaa
660
tcagatgaga gggaacaatc aaaattggaa gttaaagttt gggatccaaa tagcccactt
720
acggatcgac agattgacca gtttttagtt gtagcacgtg ctgttgggac attcgccaga
780
gccctggatt gcagcagttc tgtgaggcag cctagtttgc atatgagtgc tgctgcagct
840
tcccagaca tcacctgtt tcacgctatg gatacattgt atagacacag ctatgatttg
900
agcagtgcca ttagtgtctt agtaccactc ggaggacctg ttttatgcag agatgaaatg
960
gaggaatggt cagcctctga agctagctta tttgaagagg cactggaaaa atatggcaaa
1020

```

gacttcaatg acatacggca agattttctt ccttggaat cattgactag catcattgaa
1080
tattattaca tgtggaaaac tactgacaga tatgtgcaac agaaacgtct aaaagcagca
1140
gaagctgaga gtaaaactgaa acaagtatat atcccaacct acagcaaaacc aaatcccaac
1200
caaatatcca ctagtaatgg gaagcctggt gctgtgaatg gagctgtggg gaccacgttc
1260
cagcctcaga atcctctctt agggagagcc tgtgagagct gctatgctac acagtctcac
1320
cagtgggtatt cttggggccc acctaatatg cagtgtagat tatgtgcaat ttgttggtt
1380
tattggaaaa aatatggagg cttgaaaatg cccacccagt cagaagaaga gaagttatct
1440
cctagcccaa ctacagagga ccctcgtgtt agaagtcacg tgtcccgcca ggccatgcag
1500
ggaatgccag tccgaaacac tgggagtcca aagtctgcag tgaagaccg ccaagcttct
1560
ttccttcata ctacatattt cacaaaattt gctcgtcagg tctgcaaaaa taccctccg
1620
ctgcggcagg cagcaagacg gccgtttgtt gctattaatt atgctgccat tagggcagaa
1680
tatgccgaca gacatgctga actatctgga agtcactga aaagcaaaag cactaggaag
1740
cctttggcat gtatcattgg gtatttagag atccatcctg caaagaaacc taatgtaatt
1800
cgatctacac caagcctgca aaccccaact accaagcgga tgctaacaac tccaaatcac
1860
acatctctga gcattctggg gaaaagaaac tacagtcac acaatggtct ggatgaactc
1920
acgtgctgtg tgtcagactg agctttccct gattcattct acaatccaag acttgctgca
1980
ctgtcctgct gatgttcaca gccgtgcctg ggaagaaggc agcccccactc ccagtacatt
2040
tcagtgggag acctctgctg gcatccatgg agacgcaatg gggcggggaa ggaactgtgg
2100
gagtgcacgt tccaaatcct gtgtctccac gtgtggatca gcagcacctc gctttcttgt
2160
cagagacctc gctgttacgg agcgagacct gctgagaatt gaggggctga gggaaccct
2220
ccacctctc cttctgcag cgcctgcgc cccaccagc aacagcgcc acttggcagt
2280
ggggctgctg caagctcaga gccgtgccca ccctgcatgt gtccgctcag ctcggtctta
2340
tgctgtatag ttactaaata tgtacaggag ggccatggca tctttctgaa tggatttttc
2400
ttaagaaatg cgccagtgtt tatgaggttc aaggattttc cctgtccttg ctgttacgt
2460
cactcagctt tttctcgata ggcttcatcc ttgtttttt gaaatggggg aatttgctgt
2520
ttaccctctg cattcctata tgtgacctc cctcctactc ctccaaggaa cagaattacc
2580
gaggttctga caaaagataa gcctgtaaac tcatcatctg tgttttgtgg ttggagagaa
2640

actggtgttc tgcccggctc tgcttggta cagacagctc cagcaagagc agttgttaaa
2700
agtgccaaagc gtgtgtatca ctgtgacaag ccgtttgctt actgccctgt tcccttgagc
2760
ccaaaccagc tgatgaagaa ctgctgccag gtgggtccta cagcaggtca caaatgacct
2820
agtttcattt taagcagaca gactctgttt ggcctagagg tgtggagtga gagaactgtg
2880
tttgtgggta tgagtctgtg tggccaaccc catgaccccc acccctccag cccaacatct
2940
tgtgagcaca tgtgacctag gccccggggg acctgcctgc tcctttggct tgggctcttc
3000
gtgtttccca cctgccctcg gcacgagccc ttggtggcat cacagtggc cactcagctg
3060
tgctgagtag ctgtgctact tgtgctggca gctgcaagga taggaatagc tcagcgcccc
3120
atgagctccc tgagcagatg tgaggctggc aactcccctg ccctctgttt gcaggcacag
3180
ggtcacagtc ccaagaaaga caactggagt ctgatctccc agccatctct ggggttacta
3240
ggaggcagct ggatggcaga tacgagaggc ccaaatagcc aagctgttgc aagacagagt
3300
ggctacaatt gaattgacac cctgggaagc acgaggtaac ttggttaagga taatgatgct
3360
gtagatgtct gtgtcctcgg aggctgagct ccgcttggca gagagagcgt gctgtgtgag
3420
gtggagggcg gttttgcaga catctcagct tcttttctga ggaggagtgt gttctcatct
3480
taggcttctg caagggcgag catgggatgt ctccaccacc acccactctt ggagctgtgc
3540
tgggtcttgg cttggggcgc tgagggtggg gcctgtgtca gaagcatttg gtgagagggg
3600
tggaggtggc aggcaggggt tctctcagg gttccactg aggggtccct tcagcaaaga
3660
cctgggagga ggtgccgcat cacgtggatg tttcttccct aaagaaaaag acacaggaaa
3720
gctgtctgtc tgtacctgc tctggattta ttgtcgtact tggaccaga aggggaaatg
3780
attccctcac cctttcactt tctctctgaa ccctactaa gtggtgactg cagattctgg
3840
aaacaattag ctgcccgtga ctcagctgcc agcttcattt tctctgcctt ttgggagagg
3900
ccctctcacc caggcccaag agatttggag acaggagtca ggccaggtct gaagcaggag
3960
aaggagggcc cctcctatct acccagttga catttggtt tgggaaaagc gcagcttgtt
4020
cgagccacgt gtgccaagca ggcttttctt tcctcttgta agtaaagctc gtggttctgt
4080
agtccagtca tcctaggagg gtgatgttga ctgagacttc acgctctccc tttgtctctg
4140
gaaactgccc cctcgttctg acagaatccc ccaggcaatg gaggaagggg gccgaggcgc
4200
ctctagtctg tgcctttgcc gttggaagca ttggtgctg agagggttcc ccagccccc
4260

gctccctttc tggggccatg gtgtccctgc tgtgtgtcag tggcatgtca ctgtggttca
 4320
 gtgagcacat ggggtggacgt gcagagactg tctgcgcagc cccagcaga catgcccctg
 4380
 ggggtgaggac acaggctctg caggctatct cccctctgg ctcagtcac gcctgcccac
 4440
 ccttcacttc ttaaaggctg gcaagagagg agggccgact ggaggggtgc gccggaagg
 4500
 ttcagcctgc ccttcacaat tccccttggt cacagcccag tttccatctc tcagggccca
 4560
 cccaggaaaa tggatttcaa gtgggggttt tcatccagag atttgtttaa caaaaacaa
 4620
 gaaaagctga gaggcaaac aggggagtga ggggcaacc agaggtgggg aacaacaaca
 4680
 gcaagccgcc cccatcctgt gactggctgg gcaccaggg aggacgcgc accagagcct
 4740
 ggggccaagg ccactggggg acctgccaca ctgtggacct gtctggggg ggctggagcc
 4800
 tcgagaagcc atgattcttg tcagaaacat tccccaggc agagagagg ggccccagcc
 4860
 tctccctcc tcttggcctc cagagtcctg cagggtgcctc acagtagtga aaccagttg
 4920
 gaagcagctg ccctgggagc ctgggacagg cgaccaccg ggtcagtccc ctgccactca
 4980
 gagcagagca gggggctgag ggcaagcagg tggggctgtg cgtggcctca gtgcactcg
 5040
 tgtcatgtct gagcctgggtg tttatgcccc actgctgtcc taagtccctg gcgaggggag
 5100
 gtggaggagc tgccccgtgg gtgtttggag attctgtttt actctgccta gagaggaaac
 5160
 ggctttgggg agggaggggg aagcctttat tctttactgt tgtccctgtt ttcctttggg
 5220
 ggaatttact cagttagcag cccctcctca ccattcccc caggaaggcc atgtcccagt
 5280
 tttctgtcca cccctcctgt tcctctgcac tatgtctctg atttccctg ccagggaagc
 5340
 taaccagag cagcacctg tgctcatgag tgtttccgca ggataattcg ttctgagcat
 5400
 gataccacag tgtggattgt ctgtctgtaa ggagatgcca tctactaacc aattgtatt
 5460
 gtgtttccaa taaattcctg gaaattttgc ctggttttat gctgttcttt actaggatga
 5520
 tggtcaggt gtaagactgt gcacgcacc ctagg
 5555

<210> 5492

<211> 602

<212> PRT

<213> Homo sapiens

<400> 5492

Asp	Trp	Arg	Leu	Pro	Thr	Arg	Ala	Ala	Thr	Gly	Gly	Phe	Pro	Arg	Asp
1				5					10				15		
Arg	Asp	Tyr	Val	Tyr	Phe	Glu	Asn	Ser	Ser	Ser	Asn	Pro	Tyr	Leu	Ile

4667

450	455	460
Ser Pro Lys Ser Ala Val Lys Thr Arg Gln Ala Phe Phe Leu His Thr		
465	470	475
Thr Tyr Phe Thr Lys Phe Ala Arg Gln Val Cys Lys Asn Thr Leu Arg		480
	485	490
Leu Arg Gln Ala Ala Arg Arg Pro Phe Val Ala Ile Asn Tyr Ala Ala		495
	500	505
Ile Arg Ala Glu Tyr Ala Asp Arg His Ala Glu Leu Ser Gly Ser Pro		510
	515	520
Leu Lys Ser Lys Ser Thr Arg Lys Pro Leu Ala Cys Ile Ile Gly Tyr		525
	530	535
Leu Glu Ile His Pro Ala Lys Lys Pro Asn Val Ile Arg Ser Thr Pro		540
545	550	555
Ser Leu Gln Thr Pro Thr Thr Lys Arg Met Leu Thr Thr Pro Asn His		560
	565	570
Thr Ser Leu Ser Ile Leu Gly Lys Arg Asn Tyr Ser His His Asn Gly		575
	580	585
Leu Asp Glu Leu Thr Cys Cys Val Ser Asp		590
595	600	

<210> 5493

<211> 6538

<212> DNA

<213> Homo sapiens

<400> 5493

```

nncttcctga ccggcgcgcg cagcctgctg ccgcgggtcag cgctgctcc tgctcctccg
60
ctcctcctgc gcggggtgct gaaacagccc ggggaagtag agccgcctcc ggggagccca
120
accagccgaa cgccgcccgc gtcagcagcc ttgcgcgggc acagcatgac cgctcgcggc
180
ctggcccttg gcctcctcct gctgctactg tgtccagcgc aggtgttttc acagtctgt
240
gtttggtatg gagagtgtgg aattgcatat ggggacaaga ggtacaattg cgaatattct
300
ggccaccaa aaccattgcc aaaggatgga tatgacttag tgcaggaact ctgtccagga
360
ttcttctttg gcaatgtcag tctctgttgt gatgttcggc agcttcagac actaaaagac
420
aacctgcagc tgcctctaca gtttctgtcc agatgtccat cctgttttta taacctactg
480
aacctgtttt gtgagctgac atgtagccct cgacagagtc agtttttgaa tgttacagct
540
actgaagatt atgttgatcc tgttacaac cagacgaaaa caaatgtgaa agagttacaa
600
tactacgtcg gacagagttt tgccaatgca atgtacaatg cctgccggga tgtggaggcc
660
ccctcaagta atgacaaggc cctgggactc ctgtgtggga aggacgctga cgctgtaat
720
gccaccaact ggattgaata catgttcaat aaggacaatg gacaggcacc ttttaccatc
780
actcctgtgt tttcagattt tccagtccat gggatggagc ccatgaacaa tgccaccaa
840

```


ggctgtgacg agtctgtgga tgaggtcaca gcaccatgta gctgccaaga ctgctctatt
900
gtctgtggcc ccaagcccca gccccacct cctcctgctc cctggacgat ccttggett
960
gacgccatgt atgtcatcat gtggatcacc tacatggcgt ttttgcttgt gttttttgga
1020
gcattttttg cagtgtggtg ctacagaaaa cggatattttg tctccgagta cactcccatc
1080
gatagcaata tagctttttc tgttaatgca agtgacaaaag gagaggcgctc ctgctgtgac
1140
cctgtcagcg cagcatttga gggctgcttg aggcggctgt tcacacgctg ggggtctttc
1200
tgcgtccgaa accctggctg tgtcattttc ttctcgctgg tcttcattac tgcgtgttcg
1260
tcaggcctgg tgtttgtccg ggtcacaacc aatccagttg acctctggctc agccccagc
1320
agccaggctc gcctggaaaa agagtacttt gaccagcact ttgggccttt cttccggacg
1380
gagcagctca tcacccgggc ccctctcact gacaaacaca tttaccagcc atacccttcg
1440
ggagctgatg tacccttttg acctccgctt gacatacaga tactgcacca ggttcttgac
1500
ttacaaatag ccatcgaaaa cattactgcc tcttatgaca atgagactgt gacacttcaa
1560
gacatctgct tggccctctt ttaccgctat aacacgaact gcaccatttt gagtgtgtta
1620
aattacttcc agaacagcca ttccgtgctg gaccacaaga aaggggacga cttctttgtg
1680
tatgccgatt accacacgca ctttctgtac tgcgtacggg ctccctgcctc tctgaatgat
1740
acaagtttgc tccatgaccc ttgtctgggt acgtttggtg gaccagtgtt cccgtggctt
1800
gtgttgggag gctatgatga tcaaaactac aataacgcca ctgcccttgt gattaccttc
1860
cctgtcaata attactataa tgatacagag aagctccaga gggcccaggc ctgggaaaaa
1920
gagtttatta attttgtgaa aaactacaag aatcccaatc tgaccatttc cttcactgct
1980
gaacgaagta ttgaagatga actaaatcgt gaaagtgaca gtgatgtctt caccgttgta
2040
attagctatg ccatcatggt tctatatatt tccctagcct tggggcacat caaaagctgt
2100
cgcaggcttc tgggtggattc gaaggtctca ctaggcacgc cgggcatctt gatcgtgctg
2160
agctcggtgg cttgctcctt ggggtgtctc agctacattg ggttgccctt gaccctcatt
2220
gtgattgaag tcacccggt cctgggtgctg gctgttgag tggacaacat cttcattctg
2280
gtgcaggcct accagagaga tgaacgtctt caaggggaaa ccctggatca gcagctgggc
2340
agggtccatg gagaagtggc tcccagtatg ttctgtcat ctttttctga gactgtagca
2400
ttttcttag gagcattgtc cgtgatgcca gccgtgcaca ctttctctct ctttgcgga
2460

ttggcagtct tcattgactt tcttctgcag attacctgtt tcgtgagtct cttgggggta
2520
gacattaaac gtcaagagaa aaatcggcta gacatctttt gctgtgtcag aggtgctgaa
2580
gatggaacaa gcgtccaggc ctcagagagc tgtttgtttc gcttcttcaa aaactcctat
2640
tctccacttc tgctaaagga ctggatgaga ccaattgtga tagcaatatt tgtgggtgtt
2700
ctgtcattca gcatcgcagt cctgaacaaa gtagatattg gattggatca gtctctttcg
2760
atgccagatg actcctacat ggtggattat ttcaaatcca tcagtcagta cctgcatgcg
2820
ggtcgcgctg tgtactttgt cctggaggaa gggcacgact acacttcttc caaggggagc
2880
aacatgggtg gcggcggcat gggctgcaac aatgattccc tgggtgcagca gatatttaac
2940
gcggcgcagc tggacaatta taccgaata ggcttcgccc ctcgctcctg gatcgacgat
3000
tatttcgact gggtaagcc acagtcgtct tgctgtcgag tggacaatat cactgaccag
3060
ttctgcaatg cttcagtggg tgacctgcc tgcgttcgct gcaggcctct gactccggga
3120
ggcaaacaga ggcctcaggg gggagacttc atgagattcc tgcccatggt cctttcggat
3180
aaccctaacc ccaagtgtgg caaaggggga catgctgcct atagtcttgc agttaacatc
3240
ctccttgccc atggcaccag ggtcggagcc acgtacttca tgacctacca caccgtgctg
3300
cagacctctg ctgactttat tgacgtctct aagaaagccc gacttatagc cagtaatgtc
3360
accgaaacca tgggcattaa cggcagtgcc taccgagtat ttccttacag tgtgttttat
3420
gtcttctacg aacagtacct gaccatcatt gacgacacta tcttcaacct cgggtgtgtcc
3480
ctgggcgcga tatttctggg gaccatgggc ctctcgggct gtgagctctg gtctgcagtc
3540
atcatgtgtg ccaccatcgc catggctctg gtcaacatgt ttggagtat gtggctctgg
3600
ggcatcagtc tgaacgctgt atccttggtc aacctgggtga tgagctgtgg catctccgtg
3660
gagttctgca gccacataac cagagcggtc acggtgagca tgaaaggcag ccgctgggag
3720
cgcgcggaag aggcacttgc ccacatgggc agctccgtgt tcagtggaaat cacacttaca
3780
aaatttgag ggattgtggg gttggctttt gccaaatctc aaattttcca gatattctac
3840
ttcaggatgt atttggecat ggtettactg ggagccactc acggattaat atttctccct
3900
gtettactca gttacatagg gccatcagta aataaagcca aaagtgtgtc cactgaagag
3960
cgatacaaag gaacagagcg cgaacggctt ctaaatttct agccctctcg cagggcatcc
4020
tgactgaact gtgtctaagg gtcggtcggg ttaccactgg acgggtgctg catcggcaag
4080

gccaagttga acaccggatg gtgccaacca tcggttgttt ggcagcagct ttgaacgtag
4140
cgctctgtgaa ctcaggaatg cacagttgac ttgggaagca gtattactag atctggagggc
4200
aaccacagga cactaaactt ctcccagcct cttcaggaaa gaaacctcat tctttggcaa
4260
gcaggagggtg acactagatg gctgtgaatg tgatccgctc actgacactc tgtaaaggcc
4320
aatcaatgca ctgtctgtct ctcttttttag gagtaagcca tcccacaagt tctataccat
4380
atTTTTtagtg acagttgagg ttgtagatac actttataac attttatagt ttaaagagct
4440
ttattaatgc aataaattaa ctttgtacac atttttatat aaaaaaacag caagtgattt
4500
cagaatgttg taggcctcat tagagcttgg tctccaaaaa tctgtttgaa aaaagcaaca
4560
tgttcttcac agtggtcccc tgggtgtgaaa ttggggctcc ctgcgaaacg ctgggttcgc
4620
tgttcaaaaa agcggaatat tgtatagaaa agcatgttgt cttcagtctg ctttgcagca
4680
tctaaaaatt ttcgtgcaga aatgttgtca tggccaccaa tgccccggat aaaccttaag
4740
gcagctaaca cttggtgttt ggaaaggaga acttctacta tttcatcatt tgctgttgaa
4800
agtcgcttca gcatgtccag agatagctga tgagcaggag gatagaaact ctctagggat
4860
aacagcagac aagccaaagg tttggagtgc ctgaggacgt ggtactgcag gaactgatgc
4920
agcatataaa agaggttggtg ctggacaagg gttttgataa caagttcatg taggtaatgc
4980
tgtactgcaa tctgaaactg gttaagagaa cgaatgtatt ccatcagcac ggctatcaca
5040
aatttatgag gcatctcctt cttttgccga tagtgtttaa atactccgta gaggaagaaa
5100
tccacgaagg ctgacaggac atgggtgtac acatctgact ggtccagcac cgctgggtc
5160
cgcaccggcc tcttgaggag cgggctgctt cggctctgcc ctgcttcac cgccatcgca
5220
taactctgct cggcatccag gtacttttta tactcatggt tgagtttatc aaaaacagtg
5280
gctatcacgg gcagcgatgc tctgtctgac tcacttaaca tctgtgaaca gacagacagg
5340
atgaccatct tgcattcctt tctctggagg agaaagtcca tgagtcttcc tttgtctggt
5400
aagagattta ctatgggctc aagtttact tggagggtcc agaggtaacc ttggcttgcc
5460
ctgataatga tgtcagggtg aaagacaatc caagatgaag aatagagttt acatggaaca
5520
ggagactggc tggtcacggc agcaggacct gtgatgggga tctgataggg ctggatcgat
5580
cgagcgggaa gcacgggggtg gtggaaggta acggagccgt caaactctcc ccgtaacttg
5640
atatcgaata ttaccgatgt ctctgtatcc tgatgatgca cgactaccag gttgtccacc
5700

acgttcaggg caaactttcc cgtcctatatt aacttcaata tgtgcatctt ttacagggca
 5760
 ccttctcgtg gtagatgata gaggaccacc tccgctcctg tgctgttgga ggtccgagaa
 5820
 tgatgcctca agaagagaac atacagctgc ccgtatatgg tagccattgc gatgtctctt
 5880
 tcggaaaggc tgggttttagt tgacttaggc gcagctggta attcaatctc aaatttgggc
 5940
 agcttcgaca tagtgccagc cctaaagtga aaaggctgca ggacattctc caggaccgtg
 6000
 gtagacagca agatcacggc gctctcgggg cagtacatgt accaattcac attgagattg
 6060
 tggctcttca agagtttcag actccgtttc tctggtaata cctggtaaaa ttcgattcct
 6120
 tgatctgtta tgaagacaat ttcagttgaa ctagtccagc agaatcctag aatgttggca
 6180
 ttcttagtct tgcactcctg tgtgtattcc agctgggaat tatcagggat aaaattacaa
 6240
 aaatccacag tctttgaggt cctctgaaca gccaatatct tattttctaa ggaaaactta
 6300
 atgcacttca cttctccttt gtcattccatt ctaaatgaga tgggattcct atcatctggg
 6360
 cctttaacta ccacgccagt agctccacca gatcgaacag caaaaacctg cttgttggcc
 6420
 tcatcgaaga agacgcagtt gacaggggtc gccttctcga actgcaccgg ccgctcgcac
 6480
 agctccagat agtagtctc ctcgcccatt gcgggcgcgc cgcccgcggc gggggccc
 6538

<210> 5494

<211> 1278

<212> PRT

<213> Homo sapiens

<400> 5494

Met Thr Ala Arg Gly Leu Ala Leu Gly Leu Leu Leu Leu Leu Cys
 1 5 10 15
 Pro Ala Gln Val Phe Ser Gln Ser Cys Val Trp Tyr Gly Glu Cys Gly
 20 25 30
 Ile Ala Tyr Gly Asp Lys Arg Tyr Asn Cys Glu Tyr Ser Gly Pro Pro
 35 40 45
 Lys Pro Leu Pro Lys Asp Gly Tyr Asp Leu Val Gln Glu Leu Cys Pro
 50 55 60
 Gly Phe Phe Phe Gly Asn Val Ser Leu Cys Cys Asp Val Arg Gln Leu
 65 70 75 80
 Gln Thr Leu Lys Asp Asn Leu Gln Leu Pro Leu Gln Phe Leu Ser Arg
 85 90 95
 Cys Pro Ser Cys Phe Tyr Asn Leu Leu Asn Leu Phe Cys Glu Leu Thr
 100 105 110
 Cys Ser Pro Arg Gln Ser Gln Phe Leu Asn Val Thr Ala Thr Glu Asp
 115 120 125
 Tyr Val Asp Pro Val Thr Asn Gln Thr Lys Thr Asn Val Lys Glu Leu
 130 135 140
 Gln Tyr Tyr Val Gly Gln Ser Phe Ala Asn Ala Met Tyr Asn Ala Cys

145					150					155				160
Arg	Asp	Val	Glu	Ala	Pro	Ser	Ser	Asn	Asp	Lys	Ala	Leu	Gly	Leu
				165					170					175
Cys	Gly	Lys	Asp	Ala	Asp	Ala	Cys	Asn	Ala	Thr	Asn	Trp	Ile	Glu
			180					185					190	
Met	Phe	Asn	Lys	Asp	Asn	Gly	Gln	Ala	Pro	Phe	Thr	Ile	Thr	Pro
		195				200						205		
Phe	Ser	Asp	Phe	Pro	Val	His	Gly	Met	Glu	Pro	Met	Asn	Asn	Ala
	210					215					220			
Lys	Gly	Cys	Asp	Glu	Ser	Val	Asp	Glu	Val	Thr	Ala	Pro	Cys	Ser
225					230					235				240
Gln	Asp	Cys	Ser	Ile	Val	Cys	Gly	Pro	Lys	Pro	Gln	Pro	Pro	Pro
			245						250					255
Pro	Ala	Pro	Trp	Thr	Ile	Leu	Gly	Leu	Asp	Ala	Met	Tyr	Val	Ile
			260					265					270	
Trp	Ile	Thr	Tyr	Met	Ala	Phe	Leu	Leu	Val	Phe	Phe	Gly	Ala	Phe
		275				280						285		
Ala	Val	Trp	Cys	Tyr	Arg	Lys	Arg	Tyr	Phe	Val	Ser	Glu	Tyr	Thr
	290					295					300			
Ile	Asp	Ser	Asn	Ile	Ala	Phe	Ser	Val	Asn	Ala	Ser	Asp	Lys	Gly
305				310						315				320
Ala	Ser	Cys	Cys	Asp	Pro	Val	Ser	Ala	Ala	Phe	Glu	Gly	Cys	Leu
			325						330					335
Arg	Leu	Phe	Thr	Arg	Trp	Gly	Ser	Phe	Cys	Val	Arg	Asn	Pro	Gly
		340					345					350		
Val	Ile	Phe	Phe	Ser	Leu	Val	Phe	Ile	Thr	Ala	Cys	Ser	Ser	Gly
		355				360					365			
Val	Phe	Val	Arg	Val	Thr	Thr	Asn	Pro	Val	Asp	Leu	Trp	Ser	Ala
	370				375					380				
Ser	Ser	Gln	Ala	Arg	Leu	Glu	Lys	Glu	Tyr	Phe	Asp	Gln	His	Phe
385				390					395					400
Pro	Phe	Phe	Arg	Thr	Glu	Gln	Leu	Ile	Ile	Arg	Ala	Pro	Leu	Thr
			405						410					415
Lys	His	Ile	Tyr	Gln	Pro	Tyr	Pro	Ser	Gly	Ala	Asp	Val	Pro	Phe
		420						425				430		
Pro	Pro	Leu	Asp	Ile	Gln	Ile	Leu	His	Gln	Val	Leu	Asp	Leu	Gln
		435				440						445		
Ala	Ile	Glu	Asn	Ile	Thr	Ala	Ser	Tyr	Asp	Asn	Glu	Thr	Val	Thr
	450				455					460				
Gln	Asp	Ile	Cys	Leu	Ala	Pro	Leu	Ser	Pro	Tyr	Asn	Thr	Asn	Cys
465				470					475					480
Ile	Leu	Ser	Val	Leu	Asn	Tyr	Phe	Gln	Asn	Ser	His	Ser	Val	Leu
			485						490					495
His	Lys	Lys	Gly	Asp	Asp	Phe	Phe	Val	Tyr	Ala	Asp	Tyr	His	Thr
		500						505				510		
Phe	Leu	Tyr	Cys	Val	Arg	Ala	Pro	Ala	Ser	Leu	Asn	Asp	Thr	Ser
	515					520						525		
Leu	His	Asp	Pro	Cys	Leu	Gly	Thr	Phe	Gly	Gly	Pro	Val	Phe	Pro
	530					535					540			
Leu	Val	Leu	Gly	Gly	Tyr	Asp	Asp	Gln	Asn	Tyr	Asn	Asn	Ala	Thr
545				550					555					560
Leu	Val	Ile	Thr	Phe	Pro	Val	Asn	Asn	Tyr	Tyr	Asn	Asp	Thr	Glu
			565					570					575	
Leu	Gln	Arg	Ala	Gln	Ala	Trp	Glu	Lys	Glu	Phe	Ile	Asn	Phe	Val

```

580          585          590
Asn Tyr Lys Asn Pro Asn Leu Thr Ile Ser Phe Thr Ala Glu Arg Ser
595          600          605
Ile Glu Asp Glu Leu Asn Arg Glu Ser Asp Ser Asp Val Phe Thr Val
610          615          620
Val Ile Ser Tyr Ala Ile Met Phe Leu Tyr Ile Ser Leu Ala Leu Gly
625          630          635          640
His Ile Lys Ser Cys Arg Arg Leu Leu Val Asp Ser Lys Val Ser Leu
645          650          655
Gly Ile Ala Gly Ile Leu Ile Val Leu Ser Ser Val Ala Cys Ser Leu
660          665          670
Gly Val Phe Ser Tyr Ile Gly Leu Pro Leu Thr Leu Ile Val Ile Glu
675          680          685
Val Ile Pro Phe Leu Val Leu Ala Val Gly Val Asp Asn Ile Phe Ile
690          695          700
Leu Val Gln Ala Tyr Gln Arg Asp Glu Arg Leu Gln Gly Glu Thr Leu
705          710          715          720
Asp Gln Gln Leu Gly Arg Val Leu Gly Glu Val Ala Pro Ser Met Phe
725          730          735
Leu Ser Ser Phe Ser Glu Thr Val Ala Phe Phe Leu Gly Ala Leu Ser
740          745          750
Val Met Pro Ala Val His Thr Phe Ser Leu Phe Ala Gly Leu Ala Val
755          760          765
Phe Ile Asp Phe Leu Leu Gln Ile Thr Cys Phe Val Ser Leu Leu Gly
770          775          780
Leu Asp Ile Lys Arg Gln Glu Lys Asn Arg Leu Asp Ile Phe Cys Cys
785          790          795          800
Val Arg Gly Ala Glu Asp Gly Thr Ser Val Gln Ala Ser Glu Ser Cys
805          810          815
Leu Phe Arg Phe Phe Lys Asn Ser Tyr Ser Pro Leu Leu Lys Asp
820          825          830
Trp Met Arg Pro Ile Val Ile Ala Ile Phe Val Gly Val Leu Ser Phe
835          840          845
Ser Ile Ala Val Leu Asn Lys Val Asp Ile Gly Leu Asp Gln Ser Leu
850          855          860
Ser Met Pro Asp Asp Ser Tyr Met Val Asp Tyr Phe Lys Ser Ile Ser
865          870          875          880
Gln Tyr Leu His Ala Gly Pro Pro Val Tyr Phe Val Leu Glu Glu Gly
885          890          895
His Asp Tyr Thr Ser Ser Lys Gly Gln Asn Met Val Cys Gly Gly Met
900          905          910
Gly Cys Asn Asn Asp Ser Leu Val Gln Gln Ile Phe Asn Ala Ala Gln
915          920          925
Leu Asp Asn Tyr Thr Arg Ile Gly Phe Ala Pro Ser Ser Trp Ile Asp
930          935          940
Asp Tyr Phe Asp Trp Val Lys Pro Gln Ser Ser Cys Cys Arg Val Asp
945          950          955          960
Asn Ile Thr Asp Gln Phe Cys Asn Ala Ser Val Val Asp Pro Ala Cys
965          970          975
Val Arg Cys Arg Pro Leu Thr Pro Gly Gly Lys Gln Arg Pro Gln Gly
980          985          990
Gly Asp Phe Met Arg Phe Leu Pro Met Phe Leu Ser Asp Asn Pro Asn
995          1000          1005
Pro Lys Cys Gly Lys Gly Gly His Ala Ala Tyr Ser Ser Ala Val Asn

```

1010	1015	1020
Ile Leu Leu Gly His Gly Thr Arg Val Gly Ala Thr Tyr Phe Met Thr		
1025	1030	1035
Tyr His Thr Val Leu Gln Thr Ser Ala Asp Phe Ile Asp Ala Leu Lys		1040
	1045	1050
Lys Ala Arg Leu Ile Ala Ser Asn Val Thr Glu Thr Met Gly Ile Asn		1055
	1060	1065
Gly Ser Ala Tyr Arg Val Phe Pro Tyr Ser Val Phe Tyr Val Phe Tyr		1070
	1075	1080
Glu Gln Tyr Leu Thr Ile Ile Asp Asp Thr Ile Phe Asn Leu Gly Val		1085
	1090	1095
Ser Leu Gly Ala Ile Phe Leu Val Thr Met Val Leu Leu Gly Cys Glu		1100
1105	1110	1115
Leu Trp Ser Ala Val Ile Met Cys Ala Thr Ile Ala Met Val Leu Val		1120
	1125	1130
Asn Met Phe Gly Val Met Trp Leu Trp Gly Ile Ser Leu Asn Ala Val		1135
	1140	1145
Ser Leu Val Asn Leu Val Met Ser Cys Gly Ile Ser Val Glu Phe Cys		1150
	1155	1160
Ser His Ile Thr Arg Ala Phe Thr Val Ser Met Lys Gly Ser Arg Val		1165
	1170	1175
Glu Arg Ala Glu Glu Ala Leu Ala His Met Gly Ser Ser Val Phe Ser		1180
1185	1190	1195
Gly Ile Thr Leu Thr Lys Phe Gly Gly Ile Val Val Leu Ala Phe Ala		1200
	1205	1210
Lys Ser Gln Ile Phe Gln Ile Phe Tyr Phe Arg Met Tyr Leu Ala Met		1215
	1220	1225
Val Leu Leu Gly Ala Thr His Gly Leu Ile Phe Leu Pro Val Leu Leu		1230
	1235	1240
Ser Tyr Ile Gly Pro Ser Val Asn Lys Ala Lys Ser Cys Ala Thr Glu		1245
	1250	1255
Glu Arg Tyr Lys Gly Thr Glu Arg Glu Arg Leu Leu Asn Phe		1260
1265	1270	1275

<210> 5495

<211> 2414

<212> DNA

<213> Homo sapiens

<400> 5495

```

agacctgcac cgggccaggc aagatggcgg ccatggagac cgagacggcg ccgctgaccc
60
tagagtgcgt gccaccgat cccctgctcc tcatcttata ctttttggac tatcggggatc
120
taatcaactg ttgttatgtc agtcgaagac ttagccagct atcaagtcac gatccgctgt
180
ggagaagaca ttgcaaaaaa tactggctga tatctgagga agagaaaaca cagaagaatc
240
agtgttgtaa atctctcttc atagatactt actctgatgt aggaagatac attgaccatt
300
atgctgctat taaaaaggcc tgggatgata tcaagaaata ttggagccc aggtgtcctc
360
ggatggtttt atctctgaaa gaggggtgctc gagaggaaga cctcgatgct gtggaagcgc
420

```

agattgggct gcaagtttcc tggacgatta tcgatgttca taccgaattc acaatggaca
480
gaagtttagtt ggttcctggg gttattggga agcatggcac tgtctaataca ctatcgttct
540
gaagatttgt tagacgtcga tacagctgcc ggaggattcc agcagagaca gggactgaaa
600
tactgtctcc ctttaacttt ttgcatacat actggtttga gtcagtacat agcagtggaa
660
gctgcagagg gccgaaacaa aaatgaagtt ttctaccaat gtccagacca aatggctcga
720
aatccagctg ctattgacat gtttattata ggtgctactt ttactgactg gtttacctct
780
tatgtcaaaa atgttgtatc aggtggcttc cccatcatca gagaccaaatt tttcagatat
840
gttcacgac cagaatgtgt agcaacaact ggggatatta ctgtgtcagt ttccacatcg
900
tttctgccag aacttagctc tgtacatcca cccactatt tcttcacata ccgaatcagg
960
attgaaatgt caaaagatgc acttcctgag aaggcctgtc agttggacag tcgctatttg
1020
agaataacaa atgctaaggg tgacgtggaa gaagttcaag gacctggagt agttggtgaa
1080
tttccaatca tcagcccagg tcgggtatat gaatacacia gctgtaccac attctctaca
1140
acatcaggat acatggaagg gtattatacc ttccattttc tttactttaa agacaagatc
1200
tttaatgttg ccattccccg attccatattg gcatgtccaa cattcagggg gtctatagcc
1260
cgattggaaa tgggtcctga tgaatatgaa gagatggaag aagaggagga ggaggaagag
1320
gaggaagacg aggatgatga ttcagcagat atggatgaat cagatgaaga tgatgaagag
1380
gagagacgga ggagagtctt tgatgttccc attcgcagac gccgctgctc acgccttttt
1440
tagcaagcct tctgctgatg gaagcactag gatgattcta ggctgttaaa tagattttct
1500
aataatgtaa ataactaaat tgttctctgc atatagcagg aaaactagca tgaaatattg
1560
tttcaggccc tgggttctat gtgacactac attaggaatt gga¹ttgtttg ggtttgcttt
1620
gtgtttttga ggtagaggaa gaaatgggaa tctttttttt ctcttcagg agtcagtgga
1680
agaatagttc tctagctaag gaacggacat acctttgttt taaaatattt tatacttaca
1740
aaaatctaga aatggagagg gaactgtttt gaataaggat ttaaaatacc tgcacaagga
1800
tagagagaaa ctatgtgact cattctgtga aaagacttct tgcagttgtg agttatttag
1860
aaatgatcaa aatttgtaat taggctaata catttagtga ttcctaatat tttgtactca
1920
cagagaacta attgactaaa caacttgaa gctagtgggt tgtccttaga caatctgtct
1980
ttgaatttaa agtctttatc gctaagacct tgactttaaa tttttcatca ctacaacctt
2040

gaatttaatt tcaggtcttc aacatgatga ccttggattt aatttaaagt cttcaacact
 2100
 atgcgcttta tcatattatt cacagatgca tttttgaaat gtagtatgta aaagtatgta
 2160
 acgtgctgtt tattaacaaa agattgttca caacatctca tgtagtttaa atttgtaa
 2220
 actgcttctg ttttgcttct cctttatata cttgactgtc tttgtgataa gtgacatgaa
 2280
 ttttatgtta ggattaagta tgttttcctg aaacttggat tttttttgta attatataat
 2340
 tgagagttaa gaatgaaatc cttcaagtgt taaaaactca cattttaaaa gcaaattttg
 2400
 gttccaaaaa aaaa
 2414

<210> 5496

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5496

Met	Leu	Trp	Lys	Arg	Arg	Leu	Gly	Cys	Lys	Phe	Pro	Gly	Arg	Leu	Ser	1	5	10	15
Met	Phe	Ile	Pro	Asn	Ser	Gln	Trp	Thr	Glu	Val	Ser	Trp	Phe	Leu	Gly	20	25	30	
Leu	Leu	Gly	Ser	Met	Ala	Leu	Ser	Asn	His	Tyr	Arg	Ser	Glu	Asp	Leu	35	40	45	
Leu	Asp	Val	Asp	Thr	Ala	Ala	Gly	Gly	Phe	Gln	Gln	Arg	Gln	Gly	Leu	50	55	60	
Lys	Tyr	Cys	Leu	Pro	Leu	Thr	Phe	Cys	Ile	His	Thr	Gly	Leu	Ser	Gln	65	70	75	80
Tyr	Ile	Ala	Val	Glu	Ala	Ala	Glu	Gly	Arg	Asn	Lys	Asn	Glu	Val	Phe	85	90	95	
Tyr	Gln	Cys	Pro	Asp	Gln	Met	Ala	Arg	Asn	Pro	Ala	Ala	Ile	Asp	Met	100	105	110	
Phe	Ile	Ile	Gly	Ala	Thr	Phe	Thr	Asp	Trp	Phe	Thr	Ser	Tyr	Val	Lys	115	120	125	
Asn	Val	Val	Ser	Gly	Gly	Phe	Pro	Ile	Ile	Arg	Asp	Gln	Ile	Phe	Arg	130	135	140	
Tyr	Val	His	Asp	Pro	Glu	Cys	Val	Ala	Thr	Thr	Gly	Asp	Ile	Thr	Val	145	150	155	160
Ser	Val	Ser	Thr	Ser	Phe	Leu	Pro	Glu	Leu	Ser	Ser	Val	His	Pro	Pro	165	170	175	
His	Tyr	Phe	Phe	Thr	Tyr	Arg	Ile	Arg	Ile	Glu	Met	Ser	Lys	Asp	Ala	180	185	190	
Leu	Pro	Glu	Lys	Ala	Cys	Gln	Leu	Asp	Ser	Arg	Tyr	Trp	Arg	Ile	Thr	195	200	205	
Asn	Ala	Lys	Gly	Asp	Val	Glu	Val	Gln	Gly	Pro	Gly	Val	Val	Gly		210	215	220	
Glu	Phe	Pro	Ile	Ile	Ser	Pro	Gly	Arg	Val	Tyr	Glu	Tyr	Thr	Ser	Cys	225	230	235	240
Thr	Thr	Phe	Ser	Thr	Thr	Ser	Gly	Tyr	Met	Glu	Gly	Tyr	Tyr	Thr	Phe	245	250	255	
His	Phe	Leu	Tyr	Phe	Lys	Asp	Lys	Ile	Phe	Asn	Val	Ala	Ile	Pro	Arg				

	260							265						270	
Phe	His	Met	Ala	Cys	Pro	Thr	Phe	Arg	Val	Ser	Ile	Ala	Arg	Leu	Glu
	275							280					285		
Met	Gly	Pro	Asp	Glu	Tyr	Glu	Glu	Met	Glu	Glu	Glu	Glu	Glu	Glu	Glu
	290						295					300			
Glu	Glu	Glu	Asp	Glu	Asp	Asp	Asp	Ser	Ala	Asp	Met	Asp	Glu	Ser	Asp
305					310					315				320	
Glu	Asp	Asp	Glu	Glu	Glu	Arg	Arg	Arg	Arg	Val	Phe	Asp	Val	Pro	Ile
			325					330					335		
Arg	Arg	Arg	Arg	Cys	Ser	Arg	Leu	Phe							
	340							345							

<210> 5497

<211> 1056

<212> DNA

<213> Homo sapiens

<400> 5497

caccgaggaag aatgtggaag gatctcccat tggccggttg gggcaaaagc ctgaggcaat
60
ctttcatccc cttttgccaa ggcgagactt tcccagtgac ggtgatgtag ttggccactc
120
tgactatggg tggactcggg tgtagacctc tgaagctgag atcacacgaa aacctggcct
180
ccccgccatg tagctgttgg agagtagaaa aatagagcac gcctgatgtt tctaaatgag
240
aagactttca atagtaatga agaattccatg gcactctcct caccctcaaa cacatggcag
300
tcattcacat acaggcccca aagtcactgt tagtgctgca gtggctcctg tggacattgg
360
aaagcccgga gagggcgtgg aagaaatcag ctggcccccg gcagggttctc tgggggtttg
420
tgcccaaggc tectggagcc ctaaaaactt tcaaaagtta actccccacg tccccatcct
480
gcttgggttt ctggactttt ctgaggcacc ggcagagggg tctcgttgct cccttgagtg
540
taggggcagc cctttaacct ggctccttga gtccctgctt tttctgcttc tgttgcttc
600
ttctcgtctt tctctctctt caatatctcc ctctctttgt cctccccag ttctgacct
660
ggccatcccc ggggtgccctt gaccagcccc gtgtctctc aggggtgtccc agcaccagcc
720
tggcacagag tggggctcag ttagagtatg tgggatgttg gtttcgccag gtgagtgaat
780
gaaaggactc gaccaccaca gctgagccac tagctgggcc atgcaagag ttctaggtgc
840
aaaggctgga ggggtgaatt catttttgag aggtgtgtga gcagcttcg acccctgcc
900
catttgaacg ggggccttgc tggtcgcgtc cctgcattca ccgcgcggc catcccgta
960
tccaacagtt gatcctaact gagcacgccc acggccctgg tctggcctgg gcaccggcga
1020
ccgtagccca tcccttgatg gcctctgtgt ccccag
1056

<210> 5498

<211> 150

<212> PRT

<213> Homo sapiens

<400> 5498

```

Met Gly Gln Gly Ser Glu Ala Ala His Thr Pro Leu Lys Asn Glu Phe
 1           5           10           15
His Pro Pro Ala Phe Ala Pro Arg Thr Leu Arg Met Ala Gln Leu Val
          20           25           30
Ala Gln Leu Trp Trp Ser Ser Pro Phe Ile His Ser Pro Gly Glu Thr
          35           40           45
Asn Ile Pro His Thr Leu Thr Glu Pro His Ser Val Pro Gly Trp Cys
          50           55           60
Trp Asp Thr Leu Arg Arg His Gly Ala Gly Gln Gly His Pro Gly Met
          65           70           75           80
Ala Arg Ser Gly Thr Gly Glu Gly Gln Arg Glu Gly Asp Ile Glu Arg
          85           90           95
Glu Glu Asp Glu Glu Glu Gly Asn Arg Ser Arg Lys Ser Arg Asp Ser
          100          105          110
Arg Ser Gln Val Lys Gly Leu Pro Leu His Ser Arg Glu Gln Arg Asp
          115          120          125
Pro Ser Ala Gly Ala Ser Glu Lys Ser Arg Asn Pro Ser Arg Met Gly
          130          135          140
Thr Trp Gly Val Asn Phe
          145          150

```

<210> 5499

<211> 1918

<212> DNA

<213> Homo sapiens

<400> 5499

```

ngctagccct gtatctgtct gagcagtggg atgtgccagg aaagaaggag caaccactga
60
ctgatgaacc tttgccagtc tcccttccaa gagggatgcc agagccttct gtctttgggc
120
tgcctctgcc ctctgtagat tctctgctgg gcctttggaa ctaacacagc aacttccagg
180
gtctcatggt gaagacttta tggagcatcc tggccagaac aagccaagga gccaagacga
240
gagggacaca cggacaaaca acagacagaa gacgtactgg ccgctggact ccgctgcctc
300
ccccatctcc ccgcatctg cgcccgagg atgagcccag ccttcagggc catggatgtg
360
gagccccgcg ccaaaggcgt ccttctggag ccctttgtcc accaggtcgg ggggcactca
420
tgcgtgctcc gcttcaatga gacaacctg tgcaagcccc tggccccaaag ggaacatcag
480
ttctacgaga ccctccctgc tgagatgcgc aaattcactc ccagtagaaa aggtgtggta
540
tctgtgcgct ttgaagaaga tgaagacagg aacttgtgtc taatagcata tccattgaaa
600

```

ggggaccatg gaattgtgga cattgcacat aattcagact gtgaaccaa aagtaagctc
 660
 ctaagggtgga caacaaacaa aaaacatcat gtcttagaaa cagaaaagac ccctaaggac
 720
 tgggtgcgtc agcaccgtaa agaggagaaa atgaagagcc ataagttaga agaagaattt
 780
 gagtggctaa agaaatctga agtcttgtag tacactgtag agaagaaggg gaatataagt
 840
 tcccagctta aacactataa cccttgagc atgaaatgtc accagcaaca gttacagaga
 900
 atgaaggaga atgcaaagca tcggaaccag tacaaattta tcttactgga aaacctgact
 960
 tcccgtatg aggtgccttg tgccttgac ctcaagatgg gcacacgaca acatgggtgat
 1020
 gatgcttcag aggagaaggc agccaaccag atccgaaaat gtcagcagag cacatctgca
 1080
 gtcattggtg tgnctgtgtg tggcatgcag gtgtaccaag caggcagtg ggcagctcatg
 1140
 ttcataaaca agtaccatgg acggaagcta tcggtgcagg gcttcaagga ggcacttttc
 1200
 cagttcttcc acaatgggcg gtacctgccc cgtgaactcc tgggcccctgt gctcaagaag
 1260
 ctgactgagc tcaaggcagt gttggagcga caggagtcct accgcttcta ctcaagctcc
 1320
 ctgctgggtc tttatgatgg caaggagcgg cccgaagtgg tcctggactc agatgctgag
 1380
 gatttgaggg acctgtcaga ggaatcagct gatgagtctg ctgggtgccta tgcctacaaa
 1440
 cccatcggcg ccagctctgt agatgtgccc atgatcgact ttgcacacac cacctgcagg
 1500
 ctgtatggcg aggacaccgt ggtgcatgag ggccaggatg ctggctatat cttcgggctc
 1560
 cagagcctga tagacattgt cacagagata agtgaggaga gtggggagtg agcttgctag
 1620
 ctgctccagt acttgagagc gactctgtgt cccaggcaca gctgtgctgc gtcagggagg
 1680
 aagccagtat ggccagggtg tggctcctgc agcctggagc tgatgtgcag tggcctctgt
 1740
 gagccccagc ctgagccagt cccagctgtg cttggagtct ttattttatt taactatttc
 1800
 ttcaacattc cacatttgat gatgatacct ctttcttccc tgagtgtata tgttctaata
 1860
 caaatctttt tgtttattgt aaaaaaaaaa aaaaaaaaaa aaagaaaaac tcgaaaag
 1918

<210> 5500

<211> 426

<212> PRT

<213> Homo sapiens

<400> 5500

Met	Ser	Pro	Ala	Phe	Arg	Ala	Met	Asp	Val	Glu	Pro	Arg	Ala	Lys	Gly
1				5				10						15	
Val	Leu	Leu	Glu	Pro	Phe	Val	His	Gln	Val	Gly	Gly	His	Ser	Cys	Val

20						25						30					
Leu	Arg	Phe	Asn	Glu	Thr	Thr	Leu	Cys	Lys	Pro	Leu	Val	Pro	Arg	Glu		
35						40						45					
His	Gln	Phe	Tyr	Glu	Thr	Leu	Pro	Ala	Glu	Met	Arg	Lys	Phe	Thr	Pro		
50						55						60					
Gln	Tyr	Lys	Gly	Val	Val	Ser	Val	Arg	Phe	Glu	Glu	Asp	Glu	Asp	Arg		
65			70						75			80					
Asn	Leu	Cys	Leu	Ile	Ala	Tyr	Pro	Leu	Lys	Gly	Asp	His	Gly	Ile	Val		
			85						90			95					
Asp	Ile	Ala	His	Asn	Ser	Asp	Cys	Glu	Pro	Lys	Ser	Lys	Leu	Leu	Arg		
			100			105						110					
Trp	Thr	Thr	Asn	Lys	Lys	His	His	Val	Leu	Glu	Thr	Glu	Lys	Thr	Pro		
115						120						125					
Lys	Asp	Trp	Val	Arg	Gln	His	Arg	Lys	Glu	Glu	Lys	Met	Lys	Ser	His		
130						135						140					
Lys	Leu	Glu	Glu	Glu	Phe	Glu	Trp	Leu	Lys	Lys	Ser	Glu	Val	Leu	Tyr		
145			150						155			160					
Tyr	Thr	Val	Glu	Lys	Lys	Gly	Asn	Ile	Ser	Ser	Gln	Leu	Lys	His	Tyr		
			165						170			175					
Asn	Pro	Trp	Ser	Met	Lys	Cys	His	Gln	Gln	Gln	Leu	Gln	Arg	Met	Lys		
			180			185						190					
Glu	Asn	Ala	Lys	His	Arg	Asn	Gln	Tyr	Lys	Phe	Ile	Leu	Leu	Glu	Asn		
195						200						205					
Leu	Thr	Ser	Arg	Tyr	Glu	Val	Pro	Cys	Val	Leu	Asp	Leu	Lys	Met	Gly		
210						215						220					
Thr	Arg	Gln	His	Gly	Asp	Asp	Ala	Ser	Glu	Glu	Lys	Ala	Ala	Asn	Gln		
225			230						235			240					
Ile	Arg	Lys	Cys	Gln	Gln	Ser	Thr	Ser	Ala	Val	Ile	Gly	Val	Xaa	Val		
			245						250			255					
Cys	Gly	Met	Gln	Val	Tyr	Gln	Ala	Gly	Ser	Gly	Gln	Leu	Met	Phe	Met		
			260			265						270					
Asn	Lys	Tyr	His	Gly	Arg	Lys	Leu	Ser	Val	Gln	Gly	Phe	Lys	Glu	Ala		
275						280						285					
Leu	Phe	Gln	Phe	Phe	His	Asn	Gly	Arg	Tyr	Leu	Arg	Arg	Glu	Leu	Leu		
290						295						300					
Gly	Pro	Val	Leu	Lys	Lys	Leu	Thr	Glu	Leu	Lys	Ala	Val	Leu	Glu	Arg		
305			310						315			320					
Gln	Glu	Ser	Tyr	Arg	Phe	Tyr	Ser	Ser	Ser	Leu	Leu	Val	Ile	Tyr	Asp		
			325						330			335					
Gly	Lys	Glu	Arg	Pro	Glu	Val	Val	Leu	Asp	Ser	Asp	Ala	Glu	Asp	Leu		
			340			345						350					
Glu	Asp	Leu	Ser	Glu	Glu	Ser	Ala	Asp	Glu	Ser	Ala	Gly	Ala	Tyr	Ala		
355						360						365					
Tyr	Lys	Pro	Ile	Gly	Ala	Ser	Ser	Val	Asp	Val	Arg	Met	Ile	Asp	Phe		
370						375						380					
Ala	His	Thr	Thr	Cys	Arg	Leu	Tyr	Gly	Glu	Asp	Thr	Val	Val	His	Glu		
385			390						395			400					
Gly	Gln	Asp	Ala	Gly	Tyr	Ile	Phe	Gly	Leu	Gln	Ser	Leu	Ile	Asp	Ile		
			405						410			415					

<210> 5501

<211> 568

<212> DNA

<213> Homo sapiens

<400> 5501

attcggcacg aggtgagtcg gtggcaggaa cgtgggctct agactgtgca ttcaggctct
 60
 cctacttggc agaatgatct tggggaaacg acttcatctg aacttcagat atttcacatg
 120
 tgaagcgggg acaaaacccat gcagctcaga ggtccctgtg ggggctgggg gagctgcctt
 180
 gcaggtcttg gcacatgcac agcaggctcc ccatagcttt gtcaccacaa agggcactgt
 240
 tctattcaca gcacctcctg cttctgcctg gcaactgtgt ctccctgtgc tatatttaat
 300
 tccaccagca aagctggcga ggcaggggccc agccctgaag gagatctcct tgcctgaccc
 360
 ctggacctgg aaatggaggc ttcattgtgcc cgccttggcg gcttaagcct gctgctttgg
 420
 cagtgccatg ggtgagccga gcagctgtga ggtgggtggg gcagggtgt agccacgccc
 480
 ggggtctatt ccaggctcta ggggctggtg ctcaccccca ccccccagcga cttccgtcct
 540
 acctggcatg ctgcagccct ctgccggc
 568

<210> 5502

<211> 110

<212> PRT

<213> Homo sapiens

<400> 5502

Met	Ile	Leu	Gly	Lys	Arg	Leu	His	Leu	Asn	Phe	Arg	Tyr	Phe	Thr	Cys
1				5					10					15	
Glu	Ala	Gly	Thr	Lys	Pro	Cys	Ser	Ser	Glu	Val	Pro	Val	Gly	Ala	Gly
			20					25					30		
Gly	Ala	Ala	Leu	Gln	Val	Leu	Ala	His	Ala	Gln	Gln	Ala	Pro	His	Ser
			35				40					45			
Phe	Val	Thr	Thr	Lys	Gly	Thr	Val	Leu	Phe	Thr	Ala	Pro	Pro	Ala	Ser
			50			55					60				
Ala	Trp	Gln	Leu	Cys	Leu	Pro	Val	Leu	Tyr	Leu	Ile	Pro	Pro	Ala	Lys
65				70					75					80	
Leu	Ala	Arg	Gln	Gly	Pro	Ala	Leu	Lys	Glu	Ile	Ser	Leu	Pro	Asp	Pro
			85					90					95		
Trp	Thr	Trp	Lys	Trp	Arg	Leu	His	Val	Pro	Ala	Leu	Ala	Ala		
			100					105					110		

<210> 5503

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 5503

tgtctgggaa aaggggaactc acaaggggtg agtaccacca aattaggaga taccatgagc
 60

taacgccgtc tcagaattgc ataaatttgt ctacattttt caaagaagtt gggttatctg
120
atttaatcct cacaatagtc aagctaggaa ggtaagtgtg gaattattac cccatttgat
180
aggtagacaa attaaagctt aagatcaaac cgtttgcaaa gcaggaagca gcacttcctc
240
ttggtccagt tcttccttct ccctgggtgct aagggtcagt gatgttggct cccacagggc
300
cagaaagctg gagagaagcc cctgggtgca ggacccgggg aggaggaact gctccggggc
360
tcagcccctc atgtcagga cactcagagt gaggaactgc caccctcctg caccatctca
420
ggagagaaga agccgccagc agtctctgga gaagccaccg gggctgatgc tgggagactg
480
tgcccgcccc cccgtccag ggctccccac aaagacagaa ctctagcccc ctccaggccc
540
cagactcagg ggaagattg ttccctccca gtgggagagg tgaagatagg aaagaggtcc
600
tattctccag cccccgggaa gcagaaaaag cctaattgcca tgggtctggc cccaacatca
660
tctccgggtg cccctaactc agcccggtgc acacacaacc cagtgcctg tgggtcagggc
720
cgggggccct gccacctggc caatctctc agtacattgg cgcagagcaa ccaaacaga
780
gaccacaagc aggggcccc ggaagtgacc tgccaaatta ggaaaaagac acgaacccta
840
taccgctcag atcagctgga ggagctagag aagatattcc aagaagacca ctatcctgac
900
agtataaac gccgagagat tgcccagacg gtgggggtga cccccagcg catcatggta
960
aagggggccg gctcactggt ggcaggggtg agtggcgag ggcccaccat tgaaacactc
1020
gaattgcaga gtgagcgctc agcggtagcc tgggtgtggt tccagaatcg ccgggccaag
1080
tggcgaaaaa tggagaaact gaatgggaaa gaaagcaagg acaatcctgc agcccctggc
1140
cctgccagca gtcaatgcag ctctgcagct gagatcctac ctgctgtgcc catggagcca
1200
aagcctgacc ctttccctca ggagtccct ctggatacct ttccagagcc ccccatgctg
1260
ctgacttctg accagacttt ggccccacc caaccagtg aggggtgctca gagggtggtg
1320
acccccccac tcttcagccc cccacctgtg cgaagggccg atcttccttt ccccttggc
1380
cctgtccaca ccccccaact gatgccactg ctgatggatg ttgctggcag tgacagcagc
1440
cacaaggacg gccctgtgg gtcctggggg acaaggtaag gaacctacgg gggtaggtca
1500
ctctagtatt ctgggtgggg gtaggggggt gtagatggag agaagataga cacagagagg
1560
agaggggttaa ctgagaggag cacagagtgg tacaggagat ggggatgaaa gggataaggg
1620
gatctgggga atgacctagg ggatcacagc aatagagcag aaacaagggg aagatgcta
1679

<210> 5504
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 5504
 Gln Lys Ala Gly Glu Lys Pro Leu Ala Ala Gly Pro Gly Glu Glu Glu
 1 5 10 15
 Leu Leu Arg Gly Ser Ala Pro His Ala Gln Asp Thr Gln Ser Glu Glu
 20 25 30
 Leu Pro Pro Ser Cys Thr Ile Ser Gly Glu Lys Lys Pro Pro Ala Val
 35 40 45
 Ser Gly Glu Ala Thr Gly Ala Asp Ala Gly Arg Leu Cys Pro Pro Pro
 50 55 60
 Arg Ser Arg Ala Pro His Lys Asp Arg Thr Leu Ala Arg Ser Arg Pro
 65 70 75 80
 Gln Thr Gln Gly Glu Asp Cys Ser Leu Pro Val Gly Glu Val Lys Ile
 85 90 95
 Gly Lys Arg Ser Tyr Ser Pro Ala Pro Gly Lys Gln Lys Lys Pro Asn
 100 105 110
 Ala Met Gly Leu Ala Pro Thr Ser Ser Pro Gly Ala Pro Asn Ser Ala
 115 120 125
 Arg Ala Thr His Asn Pro Val Pro Cys Gly Ser Gly Arg Gly Pro Cys
 130 135 140
 His Leu Ala Asn Leu Leu Ser Thr Leu Ala Gln Ser Asn Gln Asn Arg
 145 150 155 160
 Asp His Lys Gln Gly Pro Pro Glu Val Thr Cys Gln Ile Arg Lys Lys
 165 170 175
 Thr Arg Thr Leu Tyr Arg Ser Asp Gln Leu Glu Glu Leu Glu Lys Ile
 180 185 190
 Phe Gln Glu Asp His Tyr Pro Asp Ser Asp Lys Arg Arg Glu Ile Ala
 195 200 205
 Gln Thr Val Gly Val Thr Pro Gln Arg Ile Met Val Lys Gly Ala Gly
 210 215 220
 Ser Leu Val Ala Gly Trp Ser Gly Gly Gly Pro Thr Ile Glu Thr Leu
 225 230 235 240
 Glu Leu Gln Ser Glu Arg Ser Ala Val Ala Trp Val Trp Phe Gln Asn
 245 250 255
 Arg Arg Ala Lys Trp Arg Lys Met Glu Lys Leu Asn Gly Lys Glu Ser
 260 265 270
 Lys Asp Asn Pro Ala Ala Pro Gly Pro Ala Ser Ser Gln Cys Ser Ser
 275 280 285
 Ala Ala Glu Ile Leu Pro Ala Val Pro Met Glu Pro Lys Pro Asp Pro
 290 295 300
 Phe Pro Gln Glu Ser Pro Leu Asp Thr Phe Pro Glu Pro Pro Met Leu
 305 310 315 320
 Leu Thr Ser Asp Gln Thr Leu Ala Pro Thr Gln Pro Ser Glu Gly Ala
 325 330 335
 Gln Arg Val Val Thr Pro Pro Leu Phe Ser Pro Pro Pro Val Arg Arg
 340 345 350
 Ala Asp Leu Pro Phe Pro Leu Gly Pro Val His Thr Pro Gln Leu Met
 355 360 365
 Pro Leu Leu Met Asp Val Ala Gly Ser Asp Ser Ser His Lys Asp Gly

370 375 380

Pro Cys Gly Ser Trp Gly Thr Arg

385 390

<210> 5505
<211> 1099
<212> DNA
<213> Homo sapiens

<400> 5505
aagcttggggc ggcccagcgg atcgtgccgc ggcgggccgag cgcagctaca ggaggggtgtc
60
cagaagccac aagccatggc tgtggggaac atcaacgagc tgcccgagaa catcctgctg
120
gagctgttca cgcacgtgcc cgcccggcag ctgctgctga actgccgcct ggtctgcagc
180
ctctggcggg acctcatcga cctcgtgacc ctctggaaac gcaagtgcct gcgagagggc
240
ttcatcactg aggactggga ccagcccgtg gccgactgga agatcttcta cttcttacgg
300
agcctgcaca ggaacctcct gcacaaccgc tgcgctgaag aggggttcga gttctggagc
360
ctggatgtga atggaggcga tgagtggaag gtggaggatc tctctcgaga ccagaggaag
420
gaattcccca atgaccaggt caagaaatac ttcgttactt catattacac ctgcctcaag
480
tcccaggttg tggacctcaa ggccgaaggg tattgggagg agctactaga cacattccgg
540
ccggacatcg tggttaagga ctggtttgct gccagagccg actgtggctg cacctaccaa
600
ctcaaagtgc agctcctgtc ggctgactac ttcgtgttg cctccttcga gccagaccgc
660
gcgaccatcc agcagaagag cgatgccaa gggagggagg tctccacac attctccaac
720
taccgccccg gcgtccgcta catctgggtt cagcacggcg gcgtggacac tcattactgg
780
gccggctggt acggccccgag ggtcaccaac agcagcatca ccatcgggcc cccgctgccc
840
tgacaccccc tgagccccca tctgctgaac cctgactggt aaacaactgc tgtcagaaaa
900
gggctgggct tgggaagggg aggtggaggc cagggtgtccc cagacctcta acccttgccc
960
ctagcagcct cttctttgtg gagcctctca gtgtgggcag ccctcgcatg ctggggctcg
1020
gccagctctc cccgaaaggt cttgacctga atgatggccg gggaagcctg cgtgtgcccc
1080
tttcagagac ggagcacct
1099

<210> 5506
<211> 280
<212> PRT
<213> Homo sapiens

<400> 5506

Lys Leu Gly Arg Pro Ser Gly Ser Cys Arg Gly Gly Arg Ala Gln Leu
 1 5 10 15
 Gln Glu Gly Val Gln Lys Pro Gln Ala Met Ala Val Gly Asn Ile Asn
 20 25 30
 Glu Leu Pro Glu Asn Ile Leu Leu Glu Leu Phe Thr His Val Pro Ala
 35 40 45
 Arg Gln Leu Leu Leu Asn Cys Arg Leu Val Cys Ser Leu Trp Arg Asp
 50 55 60
 Leu Ile Asp Leu Val Thr Leu Trp Lys Arg Lys Cys Leu Arg Glu Gly
 65 70 75 80
 Phe Ile Thr Glu Asp Trp Asp Gln Pro Val Ala Asp Trp Lys Ile Phe
 85 90 95
 Tyr Phe Leu Arg Ser Leu His Arg Asn Leu Leu His Asn Pro Cys Ala
 100 105 110
 Glu Glu Gly Phe Glu Phe Trp Ser Leu Asp Val Asn Gly Gly Asp Glu
 115 120 125
 Trp Lys Val Glu Asp Leu Ser Arg Asp Gln Arg Lys Glu Phe Pro Asn
 130 135 140
 Asp Gln Val Lys Lys Tyr Phe Val Thr Ser Tyr Tyr Thr Cys Leu Lys
 145 150 155 160
 Ser Gln Val Val Asp Leu Lys Ala Glu Gly Tyr Trp Glu Glu Leu Leu
 165 170 175
 Asp Thr Phe Arg Pro Asp Ile Val Val Lys Asp Trp Phe Ala Ala Arg
 180 185 190
 Ala Asp Cys Gly Cys Thr Tyr Gln Leu Lys Val Gln Leu Leu Ser Ala
 195 200 205
 Asp Tyr Phe Val Leu Ala Ser Phe Glu Pro Asp Pro Ala Thr Ile Gln
 210 215 220
 Gln Lys Ser Asp Ala Lys Trp Arg Glu Val Ser His Thr Phe Ser Asn
 225 230 235 240
 Tyr Pro Pro Gly Val Arg Tyr Ile Trp Phe Gln His Gly Gly Val Asp
 245 250 255
 Thr His Tyr Trp Ala Gly Trp Tyr Gly Pro Arg Val Thr Asn Ser Ser
 260 265 270
 Ile Thr Ile Gly Pro Pro Leu Pro
 275 280

<210> 5507

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 5507

nttttagaaa gccaaaggaat tgagttaaata ccaccagaga agatggctct tgatccttac
 60
 actgaactcc gaaaacagcc tcttcgtaag tatgtcaccc catcagactt tgatcaactc
 120
 aagcaatttc tcaccttga caaacaggtc cttcgattct atgcaatctg ggatgatata
 180
 gacagcatgt atggtgaatg tcggacctac atcattcatt actatcttat ggatgatagc
 240
 gtggaaattc gagaggcca cgaacggaat gatgggagag atcctttccc actcctaagc
 300

aaccgccagc gtgtgcccaa agttttggtg gaaaatgcaa agaacttccc tcagtgtgtg
360
ctagaaatct ctgaccaaga agtgttggaa tggatactg ctaaagactt cattgttggg
420
aagtcactca ctatccttgg gagaactttc ttcatttatg atttgtatcc atttactcga
480
cggattaca aagagaagtt tggaatcact gatttaccac gtattgatgt gagcaagcgg
540
gaaccacctc cagtaaaaca ggagttgcct ccttataacg gttttggact agtggaagat
600
tctgtcaga attgttttgc tctcattcca aaagctcca aaaaagacgt tattaaaatg
660
ctggtgaatg ataacaaggt gcttcgttat ttggctgtac tggaatcccc catcccagaa
720
gacaaagacc gcagatttgt cttctcttac tttctagcta ccgacatgat cagtatcttt
780
gagcctcctg ttcgcaattc tggatcatt gggggcaagt accttggcag gactaaagtt
840
gttaaaccat actctacagt ggacaaccct gtctactatg gccccagtga cttcttcatt
900
ggtgctgtga ttgaagtgtt tggtcaccgg ttcacatcc ttgatacaga cgagtatgtt
960
ttgaaataca tggagagcaa cgctgccag tattcaccag aagcactcgc gtcaattcag
1020
aaccatgtcc gaaagcgaga agcgctgct ccagaagcag aaagcaagca aactgaaaag
1080
gatccaggcg tgcaggaatt ggaagcatta atagacacaa ttcagaagca actgaaagat
1140
cactcatgca aagacaacat tcgtgaggca tttcaaattt atgacaagga agcttcagga
1200
tatgtggaca gagacatgtt ctttaaaatc tgtgaatcgc ttaacgtccc agtggatgac
1260
tccttgggta aggagttaat caggatgtgc tctcatggag aaggcaaaat taactactat
1320
aactttgttc gtgctttctc aaactgacct gctgatgaga aaatgcaaga caatttttga
1380
tactggaact atgctttgaa atacacctta cactcttcat agaggcattt acagggttcc
1440
tgaagtttta tttctgtttt ggttcttatt tcactcctac tgaagtcgaa actaaattgg
1500
atctaatagg atctaagatt ggtgccttat ttagggatgat aggggtatag caatgtctaa
1560
ttttgtgtgt caaattgact tggccacagg gggcccaa atttccttcc tttcttttta
1620
aaaaaataaa tttttttgga gatgggaaaa aaaaaaaa
1658

<210> 5508

<211> 448

<212> PRT

<213> Homo sapiens

<400> 5508

Xaa Leu Glu Ser Gln Gly Ile Glu Leu Asn Pro Pro Glu Lys Met Ala

```

1           5           10           15
Leu Asp Pro Tyr Thr Glu Leu Arg Lys Gln Pro Leu Arg Lys Tyr Val
20           25           30
Thr Pro Ser Asp Phe Asp Gln Leu Lys Gln Phe Leu Thr Phe Asp Lys
35           40           45
Gln Val Leu Arg Phe Tyr Ala Ile Trp Asp Asp Thr Asp Ser Met Tyr
50           55           60
Gly Glu Cys Arg Thr Tyr Ile Ile His Tyr Tyr Leu Met Asp Asp Thr
65           70           75           80
Val Glu Ile Arg Glu Val His Glu Arg Asn Asp Gly Arg Asp Pro Phe
85           90           95
Pro Leu Leu Met Asn Arg Gln Arg Val Pro Lys Val Leu Val Glu Asn
100          105          110
Ala Lys Asn Phe Pro Gln Cys Val Leu Glu Ile Ser Asp Gln Glu Val
115          120          125
Leu Glu Trp Tyr Thr Ala Lys Asp Phe Ile Val Gly Lys Ser Leu Thr
130          135          140
Ile Leu Gly Arg Thr Phe Phe Ile Tyr Asp Cys Asp Pro Phe Thr Arg
145          150          155          160
Arg Tyr Tyr Lys Glu Lys Phe Gly Ile Thr Asp Leu Pro Arg Ile Asp
165          170          175
Val Ser Lys Arg Glu Pro Pro Pro Val Lys Gln Glu Leu Pro Pro Tyr
180          185          190
Asn Gly Phe Gly Leu Val Glu Asp Ser Ala Gln Asn Cys Phe Ala Leu
195          200          205
Ile Pro Lys Ala Pro Lys Lys Asp Val Ile Lys Met Leu Val Asn Asp
210          215          220
Asn Lys Val Leu Arg Tyr Leu Ala Val Leu Glu Ser Pro Ile Pro Glu
225          230          235          240
Asp Lys Asp Arg Arg Phe Val Phe Ser Tyr Phe Leu Ala Thr Asp Met
245          250          255
Ile Ser Ile Phe Glu Pro Pro Val Arg Asn Ser Gly Ile Ile Gly Gly
260          265          270
Lys Tyr Leu Gly Arg Thr Lys Val Val Lys Pro Tyr Ser Thr Val Asp
275          280          285
Asn Pro Val Tyr Tyr Gly Pro Ser Asp Phe Phe Ile Gly Ala Val Ile
290          295          300
Glu Val Phe Gly His Arg Phe Ile Ile Leu Asp Thr Asp Glu Tyr Val
305          310          315          320
Leu Lys Tyr Met Glu Ser Asn Ala Ala Gln Tyr Ser Pro Glu Ala Leu
325          330          335
Ala Ser Ile Gln Asn His Val Arg Lys Arg Glu Ala Pro Ala Pro Glu
340          345          350
Ala Glu Ser Lys Gln Thr Glu Lys Asp Pro Gly Val Gln Glu Leu Glu
355          360          365
Ala Leu Ile Asp Thr Ile Gln Lys Gln Leu Lys Asp His Ser Cys Lys
370          375          380
Asp Asn Ile Arg Glu Ala Phe Gln Ile Tyr Asp Lys Glu Ala Ser Gly
385          390          395          400
Tyr Val Asp Arg Asp Met Phe Phe Lys Ile Cys Glu Ser Leu Asn Val
405          410          415
Pro Val Asp Asp Ser Leu Val Lys Glu Leu Ile Arg Met Cys Ser His
420          425          430
Gly Glu Gly Lys Ile Asn Tyr Tyr Asn Phe Val Arg Ala Phe Ser Asn

```

435

440

445

<210> 5509

<211> 818

<212> DNA

<213> Homo sapiens

<400> 5509

ccactgtgtg aagagaaatt aggggtgaccc aggcagtaca tcctactccc tggacccacc
 60
 aaggagagct gtatttgtgt ttcattggtt ctttaccaaa taattctagc atcggaattg
 120
 ctatgtgaga ggaagtaagt atacacagcg taagaggtgt gataaccaag tcatagaaga
 180
 aatgttttga gaacatggaa tcatgtgaac ttattatgtg gtaagtacag ataccagggg
 240
 ctgtcagtct caccatcctt ttctacacat gtggatgctt caggactcca gcctttgagg
 300
 atgtggcttt caacttcacc ctacaggaaa ggtagtcaat gtggagaagc cttcagccag
 360
 attccaggtc ataactctgaa taagaaaacg cctcctggag taaagccacc tgaaagccat
 420
 gtgtgtggag aggtcggcgt gggctatcca tccactgaaa ggacacacag agatcgctt
 480
 ggacgcaaac cctgtgaata tcaggaatgt agacagaagg catatacatg taagccatgt
 540
 gggaatgcct ttcgttttca ccactccttt cacatacacg aaaggcctca cagtggagaa
 600
 aacctctatg aatgttagga atttcagaaa acattcactt ccccccaaa ccttcaaaga
 660
 tgtgaaaatg catagtggag atggacctta caaatgcaag gtgggtagga aaacctttga
 720
 ctctcccagt tcatttcgaa tacatggaag atctcattct ggagagaaac ccaatgtgtg
 780
 taggcaactgt gggagcacct acaatcattt cagttttg
 818

<210> 5510

<211> 105

<212> PRT

<213> Homo sapiens

<400> 5510

Met	Trp	Leu	Ser	Thr	Ser	Pro	Tyr	Arg	Lys	Gly	Ser	Gln	Cys	Gly	Glu
1			5						10					15	
Ala	Phe	Ser	Gln	Ile	Pro	Gly	His	Asn	Leu	Asn	Lys	Lys	Thr	Pro	Pro
			20					25					30		
Gly	Val	Lys	Pro	Pro	Glu	Ser	His	Val	Cys	Gly	Glu	Val	Gly	Val	Gly
			35				40					45			
Tyr	Pro	Ser	Thr	Glu	Arg	His	Ile	Arg	Asp	Arg	Leu	Gly	Arg	Lys	Pro
			50			55					60				
Cys	Glu	Tyr	Gln	Glu	Cys	Arg	Gln	Lys	Ala	Tyr	Thr	Cys	Lys	Pro	Cys
65					70					75				80	
Gly	Asn	Ala	Phe	Arg	Phe	His	His	Ser	Phe	His	Ile	His	Glu	Arg	Pro

95

aaggccacag ccgcggccct gggcagtttc ccggcaggtg gcccggccga gctgtcgctg
120
agactcgggg agccattgac catcgtctct gaggatggag actggtggac ggtgctgtct
180
gaagtctcag gcagagagta taacatcccc agcgtccacg tggccaaagt ctcccatggg
240
tggctgtatg agggcctgag cagggagaaa gcagaggacc tgctgttggt acctgggaac
300
cctggagggg ccttcctcat ccgggagagc cagaccagga gaggtcttta ctctctgtca
360
gtccgcctca gccgccctgc atcctgggac cggatcagac actacaggat ccactgcctt
420
gacaatggct ggctgtacat ctcaccgcgc ctcaccttcc cctcactcca ggccctggtg
480
gaccattact ctgagctggc ggatgacatc tgctgcctac tcaaggagcc ctgtgtcctg
540
cagagggctg gcccgctccc tggcaaggat atacccttac ctgtgactgt gcagaggaca
600
ccactcaact ggaaagagct ggacagctcc ctctgtttt ctgaagctgc cacaggggag
660
gagtctcttc tcagtgaggg tctccgggag tccctcagct tctacatcag cctgaatgac
720
gaggctgtct ctttggatga tgcctaggcc caaaggagag gccaaaaggg aaaccaaggg
780
tgcacaccta gaaccccaat tcagcctcct gggcacccca gaggcaaggc tgtgcac
837

<210> 5514

<211> 248

<212> PRT

<213> Homo sapiens

<400> 5514

Xaa Ser Leu Ser Ser Ser Val Gln Gly Gln Gly Pro Val Thr Met Glu
1 5 10 15
Ala Glu Arg Ser Lys Ala Thr Ala Ala Leu Gly Ser Phe Pro Ala
20 25 30
Gly Gly Pro Ala Glu Leu Ser Leu Arg Leu Gly Glu Pro Leu Thr Ile
35 40 45
Val Ser Glu Asp Gly Asp Trp Trp Thr Val Leu Ser Glu Val Ser Gly
50 55 60
Arg Glu Tyr Asn Ile Pro Ser Val His Val Ala Lys Val Ser His Gly
65 70 75 80
Trp Leu Tyr Glu Gly Leu Ser Arg Glu Lys Ala Glu Asp Leu Leu Leu
85 90 95
Leu Pro Gly Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr
100 105 110
Arg Arg Gly Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser
115 120 125
Trp Asp Arg Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp
130 135 140
Leu Tyr Ile Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val
145 150 155 160
Asp His Tyr Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu

```

                165                170                175
Pro Cys Val Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro
                180                185                190
Leu Pro Val Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp
                195                200                205
Ser Ser Leu Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu
                210                215                220
Ser Glu Gly Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp
225                230                235                240
Glu Ala Val Ser Leu Asp Asp Ala
                245

```

<210> 5515
 <211> 420
 <212> DNA
 <213> Homo sapiens

```

<400> 5515
gtttgtacca acccctctc catccttgaa gcagtcattg cccactgcaa gaaaatgcaa
60
gaaaggatgt ccgcacagct ggctgctgct gagagcagac aaaagaagct ggaaatggag
120
aagcttcagc tacaagccct tgagcaagag cacaagaagc tggctgcccg ccttgaggaa
180
gagcgtggca agaacaagca ggtggctcctg atgctgggtca aagagtgcaa gcagctctca
240
agcaaaagtca tagaggaggc ccagaagctc gaagacgtaa tggccaaact ggcttcttct
300
ctttgtcacc agcacctgct tcatagtctc tctggagtgc caggaacggg tcatatagat
360
taaattctccc ataccgttcc tggataaata cctccttctc gcgagcccgc agggcctcga
420

```

<210> 5516
 <211> 120
 <212> PRT
 <213> Homo sapiens

```

<400> 5516
Val Cys Thr Asn Pro Leu Ser Ile Leu Glu Ala Val Met Ala His Cys
1          5          10          15
Lys Lys Met Gln Glu Arg Met Ser Ala Gln Leu Ala Ala Ala Glu Ser
20          25          30
Arg Gln Lys Lys Leu Glu Met Glu Lys Leu Gln Leu Gln Ala Leu Glu
35          40          45
Gln Glu His Lys Lys Leu Ala Ala Arg Leu Glu Glu Glu Arg Gly Lys
50          55          60
Asn Lys Gln Val Val Leu Met Leu Val Lys Glu Cys Lys Gln Leu Ser
65          70          75          80
Ser Lys Val Ile Glu Glu Ala Gln Lys Leu Glu Asp Val Met Ala Lys
85          90          95
Leu Ala Ser Ser Leu Cys His Gln His Leu Leu His Ser Leu Ser Gly
100         105         110
Val Pro Gly Thr Gly His Ile Asp

```


115

120

<210> 5517
 <211> 804
 <212> DNA
 <213> Homo sapiens

<400> 5517
 nctgtatggc caaagcacia aggggaaggat ccgcaattta cattcttgga gctatcatct
 60
 gtactgtact gttgtgatct actgattggc attggcatag tagtaggggc aagtgcacaga
 120
 atccgtgccca gcagtctcca ggttcagaag caattcaaga ccctgatgat agctctccag
 180
 caaccaacac atggtgacat ggtgattgtg ccaacttggt gctcagttat atgcagggcc
 240
 agtgattggt ttaagtgaag accatgggtg agatcatttg tctttggtct aatagaattt
 300
 gagctagtag aatttgagtc tccagggaaa gagctacttg accaaattaa actagtagca
 360
 ggtagagcat gaatgacagc atattatacc atcaagatgt tcttagagca gtgtatggat
 420
 ggatcgattg tactgccatc agttgtgact gacgttggtat tcaaggagaa agagaaaactt
 480
 gtttagaaaag cactttgaaa gttttttgag tacgggggtg ccctgtatca ccccgttatg
 540
 gttgaacttt ctccttcaaa attaccagac ttggcagcag tggcaaatta ttgggctaaa
 600
 agacttaatc agacatatc tgggttcaag gtcctaata taatacctgg tgcaaacatt
 660
 atacttccac tcattcagat ggttgcaccc tgccaggcat ccagtgggac tgggaatatg
 720
 gacacttgaa cattaacat cctgaagaat tttggaatga caggttacia gtgaacataa
 780
 tcagttctct atattaaaaa aaaa
 804

<210> 5518
 <211> 85
 <212> PRT
 <213> Homo sapiens

<400> 5518
 Xaa Val Trp Pro Lys His Lys Gly Lys Asp Pro Gln Phe Thr Phe Leu
 1 5 10 15
 Glu Leu Ser Ser Val Leu Tyr Cys Cys Asp Leu Leu Ile Gly Ile Gly
 20 25 30
 Ile Val Val Gly Ser Ser Asp Arg Ile Arg Ala Ser Ser Leu Gln Val
 35 40 45
 Gln Lys Gln Phe Lys Thr Leu Met Ile Ala Leu Gln Gln Pro Thr His
 50 55 60
 Gly Asp Met Val Ile Val Pro Thr Cys Cys Ser Val Ile Cys Arg Ala
 65 70 75 80
 Ser Asp Trp Phe Lys

85

<210> 5519
 <211> 401
 <212> DNA
 <213> Homo sapiens

<400> 5519
 ctccataaca tccattttcc tattatgagc agaggaaata aacatgcaga tggcttggtt
 60
 tccttcgcat aacttgtaca ggggtaggta gcataaaaga cagccggtct caagaagcaa
 120
 ccatgcgctt cactacttac catgttcctg cgggcattcc cctcccgaag ggagtctctg
 180
 aaaacaaaaca cacacagaag ttggcgctgg gcaccacatt ctctcttga cctaaccatc
 240
 aggaatttgc tgtgccatct gttcataaaa cttagccagg cccagaaagc ttgtcccaac
 300
 cacatgctaa gagccaagca gatggaacag aagctcccc aagctgctgg ctcccactat
 360
 ggctgggatg aagcaagaac ctggggccac acaggctgca a
 401

<210> 5520
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 5520
 Met Trp Leu Gly Gln Ala Phe Trp Ala Trp Leu Ser Phe Met Asn Arg
 1 5 10 15
 Trp His Ser Lys Phe Leu Met Val Arg Ser Arg Gly Glu Cys Gly Ala
 20 25 30
 Gln Arg Gln Leu Leu Cys Val Phe Val Phe Arg Asp Ser Leu Arg Glu
 35 40 45
 Gly Asn Ala Arg Arg Asn Met Val Ser Ser Glu Ala His Gly Cys Phe
 50 55 60
 Leu Arg Pro Ala Val Phe Tyr Ala Thr Tyr Pro Cys Thr Ser Tyr Ala
 65 70 75 80
 Lys Glu Thr Lys Pro Ser Ala Cys Leu Phe Pro Leu Leu Ile Ile Gly
 85 90 95
 Lys Trp Met Leu Trp
 100

<210> 5521
 <211> 2524
 <212> DNA
 <213> Homo sapiens

<400> 5521
 .ngggggagct cgcccgtgt ccgccagccc gcgggagggg ggagagaagc gaagcgtttc
 60
 cgcggttggc tactcagtgt cttggtctca agttgcctca ttgcggctgg cgttcccaat
 120

acagacgcat cgtttctttt ttaatactcc ctaagaaagg gaataacctt caagctggcg
180
ggagcaatgg ttcacataaa gaaaggcgag ctgacccagg aggagaagga gctactggaa
240
gtcatcggga aagggtactgt ccaagaagct ggaacattat tatccagcaa gaatgttcgt
300
gtcaactgtt tggacgagaa tggaatgact cctctaattgc atgcagcata taaaggaaaa
360
ctcgatatgt gcaaattact actgcgacat ggagccgatg taaattgtca tcagcatgaa
420
catggataca cagccctcat gtttctgtgca ctttctggta ataaagacat cacatgggta
480
atgttagagg ctggtgctga gacagatgtt gtcaactctg tgggaagaac agcagctcag
540
atggcagcct ttgtgggtca acatgattgt gtgaccataa tcaacaattt ctttcctcga
600
gagagactgg attattacac taagccccag ggactggata aagagccaaa actgccccca
660
aagttggcag gcccgtgca caaaattatc accacaacga atcttcatcc tgtcaagatc
720
gtgatgcttg taaatgagaa tcctctgctg acagaagaag cagccctgaa taaatgctac
780
agagtgatgg atttgatttg tgagaaatgt atgaagcaaa gagacatgaa tgaagtattg
840
gctatgaaga tgcattacat aagctgtatc tttcagaaat gcattaactt cttaaaagat
900
ggagagaata aactggacac cttgatcaaa agcttgctaa aaggccgagc ttctgatggc
960
tttccagtgt atcaagaaaa gatcattaga gaaagtatca gaaaatttcc atactgtgaa
1020
gccacactcc tacagcagct ggtgcaagc atcgctccag ttgaaattgg ttctgatccc
1080
actgcattct cgtccttac ccaagccatc actggccagg tgggttttgt ggatgtggaa
1140
ttttgacta cctgtggaga aaaggagca agtaaaagat gttcagtttg caaaatggta
1200
atatattgtg atcaaacctg ccagaaaaca cactggttta ctcataagaa aatctgtaag
1260
aatctgaagg acatttacga aaagcaacag ttggaggctg ccaaagaaaa gagacaagag
1320
gaaaaccacg gcaaacttga tgtcaattct aactgtgtta atgaagagca accagaggct
1380
gaagtaggta tctctcaaag ggattccaat cctgaagatt ccggggaagg aaagaaagaa
1440
tctcttgaaa gcgaagctga gttggaaggc ttacaggatg ctctgcagg gccacagggt
1500
tctgaggagt aaaagccaga gcaagtcca gtgtggatgg tcctcaccct gcaagaagct
1560
ggaaaactcc taggaatgca ttgtcctcac cttgttatac ctgctgggca ccatggcagg
1620
attccacatt tcatagaata caggttttca agcaaaccct tgttgaccat gccctaattt
1680
cctattgatt tctgttctat gattgaatgg atattcctat ggaaaatttt ttgtttcaaa
1740

atacaggaaa aacataccta ttacctttct gaggtggct ttccagcaat tgtttcaaag
 1800
 gaaaatagat ccccttaaag aaaaaataca ggctttaggg aacaaagga caagcagaac
 1860
 aggtgtggaa gagagatttt caggaagga aaaatttata gctacagagg gtagttagaa
 1920
 aaatcataac ttatatgtga ataaaaatata tataagcagc atttacggta gtggcattct
 1980
 acttattaag atgcaatgaa atgaagaaag gctttatgtt caaggacctt tgccatagtt
 2040
 cagctaattg tagttttata tagaaatgat cctgaacact ctgaacttga cgtagtcttg
 2100
 cggtgatatt ctatctgcag tatttgtacc tccagaatgg cagatccctc agcaggaaca
 2160
 aaggcatatt gacggttctc tcagcgtatg cattaaaaaa ggtacttctt gaaacttttg
 2220
 attcaataat gactaaacat actatgtaca caattactgt aaggctaatt cacgtgccat
 2280
 acgccacctg aaagcctgag ttatcttgct ataagctttt catggagcac ttcctttcca
 2340
 gaaactgatt tgtaactcat ttagagaatg tcctggcgctc ggtttttagc atatgtggta
 2400
 tttaaacaga gctagaatgt gatgtctgaa gataatgctg catttctggg tttcttgtgt
 2460
 ggattttaaa ataaattgtg cctacaaata taaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2520
 aaaa
 2524

<210> 5522

<211> 441

<212> PRT

<213> Homo sapiens

<400> 5522

Met	Val	His	Ile	Lys	Lys	Gly	Glu	Leu	Thr	Gln	Glu	Glu	Lys	Glu	Leu
1				5				10						15	
Leu	Glu	Val	Ile	Gly	Lys	Gly	Thr	Val	Gln	Glu	Ala	Gly	Thr	Leu	Leu
			20					25					30		
Ser	Ser	Lys	Asn	Val	Arg	Val	Asn	Cys	Leu	Asp	Glu	Asn	Gly	Met	Thr
		35					40					45			
Pro	Leu	Met	His	Ala	Ala	Tyr	Lys	Gly	Lys	Leu	Asp	Met	Cys	Lys	Leu
	50					55				60					
Leu	Leu	Arg	His	Gly	Ala	Asp	Val	Asn	Cys	His	Gln	His	Glu	His	Gly
	65			70				75						80	
Tyr	Thr	Ala	Leu	Met	Phe	Ala	Ala	Leu	Ser	Gly	Asn	Lys	Asp	Ile	Thr
			85					90						95	
Trp	Val	Met	Leu	Glu	Ala	Gly	Ala	Glu	Thr	Asp	Val	Val	Asn	Ser	Val
			100					105					110		
Gly	Arg	Thr	Ala	Ala	Gln	Met	Ala	Ala	Phe	Val	Gly	Gln	His	Asp	Cys
		115				120						125			
Val	Thr	Ile	Ile	Asn	Asn	Phe	Pro	Arg	Glu	Arg	Leu	Asp	Tyr	Tyr	
	130				135					140					
Thr	Lys	Pro	Gln	Gly	Leu	Asp	Lys	Glu	Pro	Lys	Leu	Pro	Pro	Lys	Leu

145					150					155					160
Ala	Gly	Pro	Leu	His	Lys	Ile	Ile	Thr	Thr	Thr	Asn	Leu	His	Pro	Val
				165					170					175	
Lys	Ile	Val	Met	Leu	Val	Asn	Glu	Asn	Pro	Leu	Leu	Thr	Glu	Glu	Ala
			180					185					190		
Ala	Leu	Asn	Lys	Cys	Tyr	Arg	Val	Met	Asp	Leu	Ile	Cys	Glu	Lys	Cys
		195					200					205			
Met	Lys	Gln	Arg	Asp	Met	Asn	Glu	Val	Leu	Ala	Met	Lys	Met	His	Tyr
	210					215					220				
Ile	Ser	Cys	Ile	Phe	Gln	Lys	Cys	Ile	Asn	Phe	Leu	Lys	Asp	Gly	Glu
225					230					235					240
Asn	Lys	Leu	Asp	Thr	Leu	Ile	Lys	Ser	Leu	Leu	Lys	Gly	Arg	Ala	Ser
			245					250					255		
Asp	Gly	Phe	Pro	Val	Tyr	Gln	Glu	Lys	Ile	Ile	Arg	Glu	Ser	Ile	Arg
		260						265					270		
Lys	Phe	Pro	Tyr	Cys	Glu	Ala	Thr	Leu	Leu	Gln	Gln	Leu	Val	Arg	Ser
	275						280					285			
Ile	Ala	Pro	Val	Glu	Ile	Gly	Ser	Asp	Pro	Thr	Ala	Phe	Ser	Val	Leu
	290					295					300				
Thr	Gln	Ala	Ile	Thr	Gly	Gln	Val	Gly	Phe	Val	Asp	Val	Glu	Phe	Cys
305					310					315					320
Thr	Thr	Cys	Gly	Glu	Lys	Gly	Ala	Ser	Lys	Arg	Cys	Ser	Val	Cys	Lys
			325						330					335	
Met	Val	Ile	Tyr	Cys	Asp	Gln	Thr	Cys	Gln	Lys	Thr	His	Trp	Phe	Thr
		340						345					350		
His	Lys	Lys	Ile	Cys	Lys	Asn	Leu	Lys	Asp	Ile	Tyr	Glu	Lys	Gln	Gln
		355					360					365			
Leu	Glu	Ala	Ala	Lys	Glu	Lys	Arg	Gln	Glu	Glu	Asn	His	Gly	Lys	Leu
	370					375					380				
Asp	Val	Asn	Ser	Asn	Cys	Val	Asn	Glu	Glu	Gln	Pro	Glu	Ala	Glu	Val
385					390					395					400
Gly	Ile	Ser	Gln	Arg	Asp	Ser	Asn	Pro	Glu	Asp	Ser	Gly	Glu	Gly	Lys
			405						410					415	
Lys	Glu	Ser	Leu	Glu	Ser	Glu	Ala	Glu	Leu	Glu	Gly	Leu	Gln	Asp	Ala
			420					425					430		
Pro	Ala	Gly	Pro	Gln	Val	Ser	Glu	Glu							
		435					440								

```
<210> 5523
<211> 6190
<212> DNA
<213> Homo sapiens
```

```
<400> 5523
naaaacctcc tgggaaataa ccgtgacccc ctggctcgtg ggggccgcct gttctcacta
60
acgccatggc ggggaccgga gtgagaaacc ggtgtctgtc actgactgca aagtgagcga
120
gaagcaggct gcgggcccgtc ccagcacgac gtggagcccc gcggagacct cgagatgccc
180
cgcggggaag ctccctggccc cgggagacgg ggggctaagg acgaggccct gggcgaagaa
240
tcgggggagc ggtggagccc cgagttccat ctgcagagga aattggcgga cagcagccac
300
```

agtgaacagc aagatcgaaa cagagtttct gaagaactta tcatggttgt ccaagaaatg
360
aaaaaatact tcccctcgga gagacgcaat aaaccaagca ctctagatgc cctcaactat
420
gctctccgct gtgtccacag cgttcaagca aacagtgagt ttttccagat tctcagtcag
480
aatggagcac ctcaggcaga tgtgagcatg tacagtcttg aggagctggc cactatcgct
540
tcagaacaca cttccaaaaa cacagatacc tttgtggcag tattttcatt tctgtctgga
600
aggttagtgc acatttctga acaggctgct ttgatcctga atcgtaagaa agatgtcctg
660
gcgtcttctc actttgttga cctgcttgca cctcaagaca tgaggggtatt ctacgcgcac
720
actgccagag ctcagcttcc tttctggaac aactggaccc aaagagctgc acggtatgaa
780
tgtgtccggt tgaaaccttt tttctgcagg atccgtggag gtgaagacag aaagcaagag
840
aagtgtcact ccccatctcg gatcatcccc tatctgattc atgtacatca ccctgcccag
900
ccagaattgg aatcggaacc ttgctgtctc actgtggttg aaaagattca ctctggttat
960
gaagctcctc ggatcccagt gaataaaaga atcttcacca ccacacacac cccaggggtg
1020
gtttttcttg aagtagatga aaaagcagtg cctttgctgg gttacctacc tcaggacctg
1080
attggaacat cgatcctaag ctacctgcac cctgaagatc gttctctgat ggttgccata
1140
caccaaaaag ggcctcctcc ctttgaacat tctcccatc gattttgtac tcaaaacgga
1200
gactacatca tactggattc cagttggtcc agctttgtga atccctggag ccggaagatt
1260
tctttcatca ttggtcggca taaagttcga acgagcccac taaatgagga tgtttttgct
1320
accaaaatta aaaagatgaa cgataatgac aaagacataa cagaattaca agaacaaatt
1380
tacaacttc tcttacagcc agttcacgtg agcgtgtcca gcggctacgg gagcctgggg
1440
agcagcgggt cgcaggagca gcttgcagc atgcctcct ccagtgaggc cagtgggcac
1500
cgtgtggagg agacgaaggc ggagcagatg accttgcagc aggtctatgc cagtgtgaac
1560
aaaattaaaa atctgggtca gcagctctac attgagtcaa tgaccaaata atcattcaag
1620
ccagtgcagg ggacacgcac agaaccgaat ggtgggtggtg aatgtaagac ctttacttcc
1680
ttccacaaa cactgaaaaa caatagtgtg tacactgagc cctgtgagga tttgaggaac
1740
gatgagcaca gccatccta tcaacagatc aactgtatcg acagtgtcat cagatacctg
1800
aagagctaca acattccagc tttgaaaaga aagtgtatct cctgtacaaa tacaacttct
1860
tcctcctcag aagaagacaa acagaaccac aaggcagatg atgtccaagc cttacaaggt
1920

aacaagaatg cccctcagaa aatgccaaaca aatggacggg ccatagacac aggaggagga
1980
gctccacaga tcctgtccac ggcgatgctg agcttggggg cgggcataag ccaatgcggg
2040
tacagcagca ccattgtcca tgtcccaccc ccagagacag ccagggatgc taccctcttc
2100
tgtgagccct ggaccctgaa catgcagcca gcccctttga cctcggaaga atttaaacac
2160
gtggggctca cagcggctgt tctgtcagcg cacaccaga aggaagagca gaattatgtt
2220
gataaattcc gagaaaagat cctgtcatca ccctacagct cctatcttca gcaagaaagc
2280
aggagcaaag ctaaattattc atattttcaa ggagattcta ctccaagca gacgcggctg
2340
gccggctgca ggaaagggaa gcacaagcgg aagaagctgc cggagccgcc agacagcagc
2400
agctcgaaca cgggctctgg tcccgcagg ggagcgcac agaacgcaca gcctgtctgc
2460
ccctccgcgg cctcctctcc gcacacctcg agcccgacct tcccacctgc cgccatgggtg
2520
cccagccagg ccccttacct cgtcccagct ttccccctcc cagccgcgac ctcaccggga
2580
agagaatacg cagcccccg aactgcaccg gaaggcctgc atgggccgcc cttgtccgag
2640
ggcttgacgc cttaccagc tttccctttt cttacttgg atacttttat gaccgttttc
2700
ctgctgacc cccctgtctg tcctctgttg tcgccatcgt ttttgccatg tccattcctg
2760
ggggcgacag cctcttctgc gatatcacc tcaatgtcgt cagcaatgag tccaactctg
2820
gaccaccccc cttcagtcac cagccaaagg agagaggagg aaaagtggga ggcacaaagc
2880
gaggggcacc cgttcattac ttcgagaagc agctcacctc tgcagttaaa cttacttcag
2940
gaagagatgc ccagaccctc tgaatctcca gatcagatga gaaggaacac gtgcccacaa
3000
actgagtatc agtgtgttac aggcaacaat ggcagtgaga gcagtcctgc tactaccggt
3060
gcactgtcca cggggtcacc tcccaggag aatccatccc atcctactgc cagcgtctg
3120
tccacaggat cgcctcccat gaagaatcca tccatccta ctgccagcgc tctgtccaca
3180
ggatcgctc ccatgaagaa tccatcccat cctactgcca gcacactgtc catgggattg
3240
cctcccagca ggactccatc ccctctact gccactgttc tgtccacggg gtcacctccc
3300
agcgaatccc catccagaac tgggttcagca gcacagga gacgcgacag cagtatatac
3360
cttactagta gtgtttattc ttctaaaatc tcccaaatg ggcagcaatc tcaggacgta
3420
cagaaaaaag aaacatttcc taatgtcgcc gaagagccca tctggagaat gatacggcag
3480
acacctgagc gcattctcat gacataccag gtacctgaga gggttaaaga agttgtacta
3540

aaagaagacc tggaaaagct agaaagtatg aggcagcagc agccccagtt ttctcatggg
3600
caaaaaggagg agctgggctaa ggtgtataat tggattcaaa gccagactgt cactcaagaa
3660
atcgacattc aagcctgtgt cacttgtgaa aatgaagatt cagctgatgg tggggccaca
3720
tcctgtggtc aggttctggg agaagacagc tgttgagtga ctgtgaggat gaaccttcac
3780
accttttcca agacgtgtta cacagacaga cctttttaag tcctggactt ttaaataacc
3840
atgaagttat cattgaatgt taagatTTTT tcttcttgat tttttaatac acgtaattct
3900
tttgaagcag acattgtata cagaatttta cttctctttg ttcctgatat attaaaatgg
3960
ccagttaggc tctttttgta gttgaattgt cttctaaaga gattggatgg cctctaaaga
4020
ggtatgtgta tctttatttc agatgtcacc cagagtaaat tataattaga agtatagcta
4080
gaatgagccc caaaccttag cctcatttat tttgttctgt tacataagtc attttccct
4140
tagagtgtt gaagaaatgc cacctacagg ttgtgtactt ttcataatgg tttccatgaa
4200
tgtagtacgt tcatacaggc ttcattcaac ctggcggtcc cctccataat taagatgaaa
4260
cattccggtt ttctcacaac acattagcac atactgtcca ttagcatatc tgggataacc
4320
aggttttggg ggttgagttt tggccttcac ccttgtagat ccttttcta ttgatttccc
4380
accttccagt gaaattctga aagtcttacc ttaaaaatcg atccgcttac catgggccta
4440
ttcttgtaag tttcagttag catttgcatt tgtaatatta aaatgaaaga gcttcttacc
4500
cagtgtgtt gcccttttga gtatttttgt ttttaaaata atgattgtaa aatgttttac
4560
aagtaatgta aaagctagta tcattcttac atacttctgt gtttaaattt tcattcttac
4620
caaaacagtt aactctttct ttccaatcaa tttatacaaa agaggctcgt ccagccctac
4680
cacaggctc actggcactg ccttttggtt gcccttgaac agggcagtg tgtggggact
4740
gcaaaagaga aaacgtccag gcgagcccag ttgtcctcgc ccacagggc ctgcaggctc
4800
catcagtcac cgctttctat ggcgtttgta gttgtgtctt ttaagaagtg agtgtgattg
4860
tttacttgat aaatcagctc actctctggg gctttttaga gaagtccctg attccttctt
4920
aaacttggaa tgatagatga aattcacacc cctgcagatc agaaaaaaca aatagaagaa
4980
aatgagggtt acagtaacct gttgtcttta tataacttgc aacaaactaa tttatttttt
5040
tttctttttt ttgtttttgg ttttttatgg ttttttaagg aaaatacttt tctcctttga
5100
agtttttacag ctttttgtaa atgcgtcctg ataattgatta ggaaaatcga ctttttcac
5160

catgatgacc atcctcatag ctcagatctc ctttcaaagt agtggcttcc tggatggtaa
 5220
 ttccatctta aggtgtcaga actatcttca aatgctgcct ttgacagtcc ttggaatttt
 5280
 ctgatattaa gcagttccat gcaaatactc gtgttttata aatagctctc atagtctgct
 5340
 ccatcttgat agttaagtga tttctgaagc gtttgtgtgt gtgttgatca ggttgtgtga
 5400
 tatttttgct tgataaagaa tcaaatttga aacaattaac cagccagtag attgtctgtc
 5460
 agtgaccttc tgtagtaata aagtttttgc cactgtaaat aaaaacagta tccgtagcta
 5520
 tcaggatcat tgcgcactca tatatgctaa gccttctggt ctctaataga agcctttctt
 5580
 ttccattggt tctggatatt tgtattatcc aaatgtgctt atttctttgc cttagcacac
 5640
 gttttatgga gtacttggtta tactaggttt gatttgaaac tgggtgcttgt cgcagaactg
 5700
 tcagagcatg aggagcgctc ctctgtggg tggacgcatt cacgcactcc caggttgcac
 5760
 ctgctgctgg cggtagcagc ggggttcagc agcttgaccg atgcccccg agggggctct
 5820
 cccagctta aactttgttg tttaaatttg ttaacttttt atattaatga ctattgaaag
 5880
 tggtaataaa aatttatatt ataggcttca atgttttcat gaatgttacc caaaaagctg
 5940
 tgttttcttt ggtcagaggt caaaatttat gaaaaacaaa atgctgtatg aatggaaatc
 6000
 attttgcaat tgagtgcac ttcattgtaa ttcacagtgt aaatttaatc caaactgaaa
 6060
 ttttgtttca actgaatttg taattaactc tgaatttggt tttaatcatt agtaatat
 6120
 cagttgggta tctttttaag taaaaacaac aaataaactc tgtacatgta aaacgtgaaa
 6180
 aaaaaaaaaa
 6190

<210> 5524

<211> 1193

<212> PRT

<213> Homo sapiens

<400> 5524

Met	Pro	Arg	Gly	Glu	Ala	Pro	Gly	Pro	Gly	Arg	Arg	Gly	Ala	Lys	Asp
1				5				10					15		
Glu	Ala	Leu	Gly	Glu	Glu	Ser	Gly	Glu	Arg	Trp	Ser	Pro	Glu	Phe	His
		20					25					30			
Leu	Gln	Arg	Lys	Leu	Ala	Asp	Ser	Ser	His	Ser	Glu	Gln	Gln	Asp	Arg
		35				40					45				
Asn	Arg	Val	Ser	Glu	Glu	Leu	Ile	Met	Val	Val	Gln	Glu	Met	Lys	Lys
		50				55				60					
Tyr	Phe	Pro	Ser	Glu	Arg	Arg	Asn	Lys	Pro	Ser	Thr	Leu	Asp	Ala	Leu
65					70				75				80		
Asn	Tyr	Ala	Leu	Arg	Cys	Val	His	Ser	Val	Gln	Ala	Asn	Ser	Glu	Phe

4702

Tyr Thr Glu Pro Cys Glu Asp Leu Arg Asn Asp Glu His Ser Pro Ser
 515 520 525
 Tyr Gln Gln Ile Asn Cys Ile Asp Ser Val Ile Arg Tyr Leu Lys Ser
 530 535 540
 Tyr Asn Ile Pro Ala Leu Lys Arg Lys Cys Ile Ser Cys Thr Asn Thr
 545 550 555 560
 Thr Ser Ser Ser Ser Glu Glu Asp Lys Gln Asn His Lys Ala Asp Asp
 565 570 575
 Val Gln Ala Leu Gln Gly Asn Lys Asn Ala Pro Gln Lys Met Pro Thr
 580 585 590
 Asn Gly Arg Ser Ile Asp Thr Gly Gly Gly Ala Pro Gln Ile Leu Ser
 595 600 605
 Thr Ala Met Leu Ser Leu Gly Ser Gly Ile Ser Gln Cys Gly Tyr Ser
 610 615 620
 Ser Thr Ile Val His Val Pro Pro Pro Glu Thr Ala Arg Asp Ala Thr
 625 630 635 640
 Leu Phe Cys Glu Pro Trp Thr Leu Asn Met Gln Pro Ala Pro Leu Thr
 645 650 655
 Ser Glu Glu Phe Lys His Val Gly Leu Thr Ala Ala Val Leu Ser Ala
 660 665 670
 His Thr Gln Lys Glu Glu Gln Asn Tyr Val Asp Lys Phe Arg Glu Lys
 675 680 685
 Ile Leu Ser Ser Pro Tyr Ser Ser Tyr Leu Gln Gln Glu Ser Arg Ser
 690 695 700
 Lys Ala Lys Tyr Ser Tyr Phe Gln Gly Asp Ser Thr Ser Lys Gln Thr
 705 710 715 720
 Arg Ser Ala Gly Cys Arg Lys Gly Lys His Lys Arg Lys Lys Leu Pro
 725 730 735
 Glu Pro Pro Asp Ser Ser Ser Ser Asn Thr Gly Ser Gly Pro Arg Arg
 740 745 750
 Gly Ala His Gln Asn Ala Gln Pro Cys Cys Pro Ser Ala Ala Ser Ser
 755 760 765
 Pro His Thr Ser Ser Pro Thr Phe Pro Pro Ala Ala Met Val Pro Ser
 770 775 780
 Gln Ala Pro Tyr Leu Val Pro Ala Phe Pro Leu Pro Ala Ala Thr Ser
 785 790 795 800
 Pro Gly Arg Glu Tyr Ala Ala Pro Gly Thr Ala Pro Glu Gly Leu His
 805 810 815
 Gly Pro Pro Leu Ser Glu Gly Leu Gln Pro Tyr Pro Ala Phe Pro Phe
 820 825 830
 Pro Tyr Leu Asp Thr Phe Met Thr Val Phe Leu Pro Asp Pro Pro Val
 835 840 845
 Cys Pro Leu Leu Ser Pro Ser Phe Leu Pro Cys Pro Phe Leu Gly Ala
 850 855 860
 Thr Ala Ser Ser Ala Ile Ser Pro Ser Met Ser Ser Ala Met Ser Pro
 865 870 875 880
 Thr Leu Asp Pro Pro Pro Ser Val Thr Ser Gln Arg Arg Glu Glu Glu
 885 890 895
 Lys Trp Glu Ala Gln Ser Glu Gly His Pro Phe Ile Thr Ser Arg Ser
 900 905 910
 Ser Ser Pro Leu Gln Leu Asn Leu Leu Gln Glu Glu Met Pro Arg Pro
 915 920 925
 Ser Glu Ser Pro Asp Gln Met Arg Arg Asn Thr Cys Pro Gln Thr Glu
 930 935 940

Tyr Gln Cys Val Thr Gly Asn Asn Gly Ser Glu Ser Ser Pro Ala Thr
 945 950 955 960
 Thr Gly Ala Leu Ser Thr Gly Ser Pro Pro Arg Glu Asn Pro Ser His
 965 970 975
 Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys Asn Pro
 980 985 990
 Ser His Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys
 995 1000 1005
 Asn Pro Ser His Pro Thr Ala Ser Thr Leu Ser Met Gly Leu Pro Pro
 1010 1015 1020
 Ser Arg Thr Pro Ser His Pro Thr Ala Thr Val Leu Ser Thr Gly Ser
 1025 1030 1035 1040
 Pro Pro Ser Glu Ser Pro Ser Arg Thr Gly Ser Ala Ala Ser Gly Ser
 1045 1050 1055
 Ser Asp Ser Ser Ile Tyr Leu Thr Ser Ser Val Tyr Ser Ser Lys Ile
 1060 1065 1070
 Ser Gln Asn Gly Gln Gln Ser Gln Asp Val Gln Lys Lys Glu Thr Phe
 1075 1080 1085
 Pro Asn Val Ala Glu Glu Pro Ile Trp Arg Met Ile Arg Gln Thr Pro
 1090 1095 1100
 Glu Arg Ile Leu Met Thr Tyr Gln Val Pro Glu Arg Val Lys Glu Val
 1105 1110 1115 1120
 Val Leu Lys Glu Asp Leu Glu Lys Leu Glu Ser Met Arg Gln Gln Gln
 1125 1130 1135
 Pro Gln Phe Ser His Gly Gln Lys Glu Glu Leu Ala Lys Val Tyr Asn
 1140 1145 1150
 Trp Ile Gln Ser Gln Thr Val Thr Gln Glu Ile Asp Ile Gln Ala Cys
 1155 1160 1165
 Val Thr Cys Glu Asn Glu Asp Ser Ala Asp Gly Ala Ala Thr Ser Cys
 1170 1175 1180
 Gly Gln Val Leu Val Glu Asp Ser Cys
 1185 1190

<210> 5525

<211> 761

<212> DNA

<213> Homo sapiens

<400> 5525

nggatccaag gtgagttgtc tggcaagaga agagtaggac tctgcatacc atgcccagag
 60
 ctgagatgga ctttatctgc ctacctgcct ctgcttgctc agtgggaaca tgaggagaga
 120
 gtgggcatca gtggttctgg ggcagggctc ctcttctgag atggggatta aggaagaggg
 180
 tgagcagggg tggatgttta gggggatgcc taaattcccc agtaaggaga ccgcagataa
 240
 actcaactct gtccatctta gcagggtat gtgacctttg aggatgtggc tgtctacttc
 300
 tcccaggagg aatggagatt gcttgatgac gctcagaggc tcctctaccg caatgtgatg
 360
 ctggagaact ttacacttct ggcctctctg ggacttgcgt cttccaagac ccatgaaata
 420

acccagctgg agtcatggga ggagcccttc atgcctgctt gggaagttgt gacttcagcc
 480
 ataccgagag aaactctgag gatggccttt atgagggagc tggcaattga acatcattca
 540
 tctaaatatg cacactggag gcaagatgag aattcctgac agattgtcct tcctgagaag
 600
 acagccctct gccttggagc tccagagaga gggagccctg tattcttggc tgtacccgctc
 660
 gaatggagtt ttgatctcgc tgagtttggga gttgggggag gaaaggagtg gtcttgggtc
 720
 aaatgtgact cacttttgct gttcttgtga atgttagatc t
 761

<210> 5526

<211> 102

<212> PRT

<213> Homo sapiens

<400> 5526

Val	Thr	Phe	Glu	Asp	Val	Ala	Val	Tyr	Phe	Ser	Gln	Glu	Glu	Trp	Arg
1				5				10					15		
Leu	Leu	Asp	Asp	Ala	Gln	Arg	Leu	Leu	Tyr	Arg	Asn	Val	Met	Leu	Glu
		20					25					30			
Asn	Phe	Thr	Leu	Leu	Ala	Ser	Leu	Gly	Leu	Ala	Ser	Ser	Lys	Thr	His
	35					40					45				
Glu	Ile	Thr	Gln	Leu	Glu	Ser	Trp	Glu	Glu	Pro	Phe	Met	Pro	Ala	Trp
50					55					60					
Glu	Val	Val	Thr	Ser	Ala	Ile	Pro	Arg	Glu	Thr	Leu	Arg	Met	Ala	Phe
65				70				75					80		
Met	Arg	Glu	Leu	Ala	Ile	Glu	His	His	Ser	Ser	Lys	Tyr	Ala	His	Trp
			85					90					95		
Arg	Gln	Asp	Glu	Asn	Ser										
			100												

<210> 5527

<211> 728

<212> DNA

<213> Homo sapiens

<400> 5527

nnagatctga cactaaaggg catgagaacc actggatata tgtatattcc ggctttggca
 60
 gcgttgcaact ctcccagttc tctactctcc cctcagggtca ccggattgaa actgtctcag
 120
 gaccttgatg atcttgccat tctctacctg gccacagttc aagccattgc tttggggact
 180
 cgcttcatta tagaagccat ggaggcagca gggcactcaa tcagtactct tttcctatgt
 240
 ggaggcctca gcaagaatcc cctttttgtg caaatgcatg cggacattac tggcatgcct
 300
 gtggctcctgt cgcaagaggt ggagtcctgt cttgtgggtg ctgctgttct gggtgccctg
 360
 gcctcagggg atttcgcttc tgtacaggaa gcaatggcaa aaatgagcaa agttgggaaa
 420

gttggtgtcc cgagactaca ggataaaaaa tactatgata agaaatacca agtattcctg
 480
 aagctggttg aacaccagaa ggagtatttg gcgatcatga atgatgactg aacagggtt
 540
 gcagggtgctg atgccagaag cttatgtgcc attgcattaa agacttctgt catttgatcc
 600
 atgttcaaga cccttgaggt attgtttcat ctttctgta ttgtctttca ataaagaaaa
 660
 caaacatgtg caaccagaaa aaaaaaaaaa aaaaataaaa aaaaaaaaaa aaaaaaaaaa
 720
 aaaaaaaaa
 728

<210> 5528

<211> 176

<212> PRT

<213> Homo sapiens

<400> 5528

Xaa	Asp	Leu	Thr	Leu	Lys	Gly	Met	Arg	Thr	Thr	Gly	Tyr	Leu	Tyr	Ile
1				5					10					15	
Pro	Ala	Leu	Ala	Ala	Leu	His	Ser	Pro	Ser	Ser	Leu	Leu	Ser	Pro	Gln
			20					25					30		
Val	Thr	Gly	Leu	Lys	Leu	Ser	Gln	Asp	Leu	Asp	Asp	Leu	Ala	Ile	Leu
		35					40					45			
Tyr	Leu	Ala	Thr	Val	Gln	Ala	Ile	Ala	Leu	Gly	Thr	Arg	Phe	Ile	Ile
	50					55					60				
Glu	Ala	Met	Glu	Ala	Ala	Gly	His	Ser	Ile	Ser	Thr	Leu	Phe	Leu	Cys
65					70					75				80	
Gly	Gly	Leu	Ser	Lys	Asn	Pro	Leu	Phe	Val	Gln	Met	His	Ala	Asp	Ile
			85					90						95	
Thr	Gly	Met	Pro	Val	Val	Leu	Ser	Gln	Glu	Val	Glu	Ser	Val	Leu	Val
		100						105					110		
Gly	Ala	Ala	Val	Leu	Gly	Ala	Cys	Ala	Ser	Gly	Asp	Phe	Ala	Ser	Val
		115					120					125			
Gln	Glu	Ala	Met	Ala	Lys	Met	Ser	Lys	Val	Gly	Lys	Val	Val	Phe	Pro
	130					135					140				
Arg	Leu	Gln	Asp	Lys	Lys	Tyr	Tyr	Asp	Lys	Lys	Tyr	Gln	Val	Phe	Leu
145					150					155				160	
Lys	Leu	Val	Glu	His	Gln	Lys	Glu	Tyr	Leu	Ala	Ile	Met	Asn	Asp	Asp
			165					170						175	

<210> 5529

<211> 2602

<212> DNA

<213> Homo sapiens

<400> 5529

nntgccacc ttttgtgggg ggggaaagga cacaaggttt tttttttttt ttttttttta
 60
 gcaatggcgg ttcccggcgt ggggctcttg acccgtttga acctgtgtgc ccggagaaga
 120
 actcgagtcc agcggcctat cgtcaggctt ttgagttgcc caggaactgt ggccaaagac
 180

cttaggagag acgagcagcc ttcagggagc gtggagacag gttttgaaga caagattccc
240
aaaaggagat tctctgagat gcaaaatgaa agacgagaac aggcacagcg gactgtttta
300
atacattgcc cagagaaaat cagtgaaaac aagtttctta aatatttata ccaatttgga
360
cctattaata atcatttctt ctatgaaagc tttggtctct atgctgtcgt agaattttgc
420
caaaaggaaa gcatagggtc actgcagaat gggactcata ctccaagcac ggccatggag
480
actgcaattc cattcagatc acgtttcttc aatctgaagt tgaaaaacca gacttctgaa
540
cggtcacgcg tacggtcaag taatcagttg ccacgttcaa acaagcagct ttttgaatta
600
ctttgttatg cagaaagtat agacgatcag ctgaacactc tcttgaagga gttccagcta
660
acagaggaga acactaagct ccgatatctc acctgttctc ttattgaaga catggccgcc
720
gcgtattttc cagactgcat agtcagaccc tttggctcct cagtcaacac ttttgggaag
780
ttaggatgtg atttggacat gtttttggat ctagatgaaa ccagaaacct cagcgctcac
840
aagatctcag gaaattttct gatggaattt caagtgaaaa atgttccttc agaaagaatt
900
gcaactcaga agatcctgtc tgtgttagga gagtgccttg accacttttg ccttggtgtg
960
gtgggtgtgc aaaaaatatt aaatgcccggtgtccgctcg tgaggttctc acaccaggcc
1020
tccggatttc agtgtgattt gactacgaac aataggattg ccttgacaag ttccgaactc
1080
ctttatatat atggtgccct agactcaaga gtgagagcct tgggtgttcag tgtacggtgc
1140
tgggctcgag cacattcact aacaagtagt attcctggtg catggattac aaatttctcc
1200
cttaaatga tggatcatctt ttttctccag agaagatcac ccctattct tccaacacta
1260
gattccttaa aaaccctagc agatgcagaa gataaatgtg taatagaagg caacaactgc
1320
acatttgttc gtgacttgag tagaattaaa ccttcacaga acacagaaac attagaatta
1380
ctactgaagg aattttttga gtattttggc aattttgctt tcgataaaaa ttccataaat
1440
attcgacagg gaagggagca aaacaaacct gattcttctc ctctgtacat tcagaatcca
1500
tttgaaactt ctctcaacat aagcaaaaat gtaagtcaaa gccagctgca aaaatttgta
1560
gatttggccc gagaaagtgc ctggatttta caacaggaag atacagatcg accttcata
1620
tcaagtaatc ggccctgggg gctggtatcc ctattgtac catctgtccc aaacagaaa
1680
tcctttacca agaagaaaag caataagttt gcaattgaaa cagtcaaaaa cttgctagaa
1740
tctttaaaag gtaacagaac agaaaatttc acaaaaacca gtgggaagag aacaattagt
1800

actcagacat gatggctgct acattgtgta aagaactggg cttagcctat caaatgggtct
 1860
 gtggacttac ttggaaaaac tgatttgaaa ctttcacaga tctcagcttt catctgatgt
 1920
 cacttttcat gatcttctca ttggccccct taacctgggc tgaagttctg ggatgttttc
 1980
 agtttgatca gtctgatact cagtggcact ttattaaaac atcagctgtg gagtgtggcg
 2040
 gtgcacacct gtagtcccag ctgctcagga ggctgaggca ggaggatctc ttgagcccag
 2100
 gattttgaat ccatcgtgga caacatagca agattccatc tctaaaaaaa atgaaaataa
 2160
 acataagcca caaggaatgg gtgaaagatt attgtaatgt gctttaacta aataggtaaa
 2220
 tataactaac aaatgctaaa actcagtttt aggatgaaac cattgttgat atccacatca
 2280
 gtcctgtgtt agaaaacatt taaaatgact tttagttatg tacagtacgt tggcaatgaa
 2340
 tacattaagc ttcaaaattt ggtagtgctc tcgaatatgt atatttgtat ttttcaagcg
 2400
 aagttctctt attcacatat aaattaaagt gggttggtac tgatatcaaa aaatgtttat
 2460
 gtttttagaa cagacatttc agtcactgca ttcttaggta ttccaaacca aatatgatga
 2520
 catcaataga ttgcatttta aaaatattgt ttgatttttc tattttcaaa aataaaattc
 2580
 tgtttctaac taaaaaaaaa aa
 2602

<210> 5530

<211> 603

<212> PRT

<213> Homo sapiens

<400> 5530

Xaa	Ala	His	Leu	Leu	Trp	Gly	Gly	Lys	Gly	His	Lys	Val	Phe	Phe	Phe
1			5					10					15		
Phe	Phe	Phe	Leu	Ala	Met	Ala	Val	Pro	Gly	Val	Gly	Leu	Leu	Thr	Arg
		20						25				30			
Leu	Asn	Leu	Cys	Ala	Arg	Arg	Arg	Thr	Arg	Val	Gln	Arg	Pro	Ile	Val
	35					40					45				
Arg	Leu	Leu	Ser	Cys	Pro	Gly	Thr	Val	Ala	Lys	Asp	Leu	Arg	Arg	Asp
	50				55					60					
Glu	Gln	Pro	Ser	Gly	Ser	Val	Glu	Thr	Gly	Phe	Glu	Asp	Lys	Ile	Pro
65			70					75						80	
Lys	Arg	Arg	Phe	Ser	Glu	Met	Gln	Asn	Glu	Arg	Arg	Glu	Gln	Ala	Gln
		85					90						95		
Arg	Thr	Val	Leu	Ile	His	Cys	Pro	Glu	Lys	Ile	Ser	Glu	Asn	Lys	Phe
	100						105					110			
Leu	Lys	Tyr	Leu	Ser	Gln	Phe	Gly	Pro	Ile	Asn	Asn	His	Phe	Phe	Tyr
	115				120					125					
Glu	Ser	Phe	Gly	Leu	Tyr	Ala	Val	Val	Glu	Phe	Cys	Gln	Lys	Glu	Ser
	130				135					140					
Ile	Gly	Ser	Leu	Gln	Asn	Gly	Thr	His	Thr	Pro	Ser	Thr	Ala	Met	Glu

145		150		155		160									
Thr	Ala	Ile	Pro	Phe	Arg	Ser	Arg	Phe	Phe	Asn	Leu	Lys	Leu	Lys	Asn
			165						170					175	
Gln	Thr	Ser	Glu	Arg	Ser	Arg	Val	Arg	Ser	Ser	Asn	Gln	Leu	Pro	Arg
			180					185					190		
Ser	Asn	Lys	Gln	Leu	Phe	Glu	Leu	Leu	Cys	Tyr	Ala	Glu	Ser	Ile	Asp
		195					200				205				
Asp	Gln	Leu	Asn	Thr	Leu	Leu	Lys	Glu	Phe	Gln	Leu	Thr	Glu	Glu	Asn
		210					215				220				
Thr	Lys	Leu	Arg	Tyr	Leu	Thr	Cys	Ser	Leu	Ile	Glu	Asp	Met	Ala	Ala
225					230					235					240
Ala	Tyr	Phe	Pro	Asp	Cys	Ile	Val	Arg	Pro	Phe	Gly	Ser	Ser	Val	Asn
			245						250					255	
Thr	Phe	Gly	Lys	Leu	Gly	Cys	Asp	Leu	Asp	Met	Phe	Leu	Asp	Leu	Asp
		260						265					270		
Glu	Thr	Arg	Asn	Leu	Ser	Ala	His	Lys	Ile	Ser	Gly	Asn	Phe	Leu	Met
		275					280					285			
Glu	Phe	Gln	Val	Lys	Asn	Val	Pro	Ser	Glu	Arg	Ile	Ala	Thr	Gln	Lys
	290					295					300				
Ile	Leu	Ser	Val	Leu	Gly	Glu	Cys	Leu	Asp	His	Phe	Gly	Pro	Gly	Cys
305					310					315					320
Val	Gly	Val	Gln	Lys	Ile	Leu	Asn	Ala	Arg	Cys	Pro	Leu	Val	Arg	Phe
			325						330					335	
Ser	His	Gln	Ala	Ser	Gly	Phe	Gln	Cys	Asp	Leu	Thr	Thr	Asn	Asn	Arg
		340						345					350		
Ile	Ala	Leu	Thr	Ser	Ser	Glu	Leu	Tyr	Ile	Tyr	Gly	Ala	Leu	Asp	
		355				360					365				
Ser	Arg	Val	Arg	Ala	Leu	Val	Phe	Ser	Val	Arg	Cys	Trp	Ala	Arg	Ala
	370					375					380				
His	Ser	Leu	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Trp	Ile	Thr	Asn	Phe	Ser
385					390					395					400
Leu	Thr	Met	Met	Val	Ile	Phe	Phe	Leu	Gln	Arg	Arg	Ser	Pro	Pro	Ile
			405						410					415	
Leu	Pro	Thr	Leu	Asp	Ser	Leu	Lys	Thr	Leu	Ala	Asp	Ala	Glu	Asp	Lys
		420						425				430			
Cys	Val	Ile	Glu	Gly	Asn	Asn	Cys	Thr	Phe	Val	Arg	Asp	Leu	Ser	Arg
		435					440				445				
Ile	Lys	Pro	Ser	Gln	Asn	Thr	Glu	Thr	Leu	Glu	Leu	Leu	Leu	Lys	Glu
	450					455				460					
Phe	Phe	Glu	Tyr	Phe	Gly	Asn	Phe	Ala	Phe	Asp	Lys	Asn	Ser	Ile	Asn
465					470					475					480
Ile	Arg	Gln	Gly	Arg	Glu	Gln	Asn	Lys	Pro	Asp	Ser	Ser	Pro	Leu	Tyr
			485						490					495	
Ile	Gln	Asn	Pro	Phe	Glu	Thr	Ser	Leu	Asn	Ile	Ser	Lys	Asn	Val	Ser
		500						505				510			
Gln	Ser	Gln	Leu	Gln	Lys	Phe	Val	Asp	Leu	Ala	Arg	Glu	Ser	Ala	Trp
		515					520					525			
Ile	Leu	Gln	Gln	Glu	Asp	Thr	Asp	Arg	Pro	Ser	Ile	Ser	Ser	Asn	Arg
	530					535					540				
Pro	Trp	Gly	Leu	Val	Ser	Leu	Leu	Leu	Pro	Ser	Ala	Pro	Asn	Arg	Lys
545					550					555					560
Ser	Phe	Thr	Lys	Lys	Lys	Ser	Asn	Lys	Phe	Ala	Ile	Glu	Thr	Val	Lys
			565						570					575	
Asn	Leu	Leu	Glu	Ser	Leu	Lys	Gly	Asn	Arg	Thr	Glu	Asn	Phe	Thr	Lys

580
585
 Thr Ser Gly Lys Arg Thr Ile Ser Thr Gln Thr
595
600

```
<210> 5531
<211> 3056
<212> DNA
<213> Homo sapiens
```

<400> 5531
gccccgtccg cgtgacgctc ctgcctgcmc gcgcccaagc catgctccgc cccagctcag
60
gtaacggagg ccttggaag agactctgcm tcaggctacc cagcagagat cagcaatcct
120
tggtcactg aggaggtttg gatttgctc aaagggcact gcaaaaattg aacagaggaa
180
tcccaaggaa gctgcctgaa tttgcctgta tactctcgtt ctgcgactta taaaggacca
240
gacaaatcaa attagtgtt ttggtttccg ccagctgtgg atgcctttga cattatgacc
300
gcagaggatt ccaccgcagc catgagcagt gactcggccg cggggtctc ggccaagggtg
360
cccaggggcg tggcgggcg gcccacagag gcagcactgc tggcgctgat ggagcgcacg
420
ggctacagca tgggtcaaga gaacgggcag cgcaagtacg gcgggccacc gccgggctgg
480
gagggcccg acccgagcg tggtcgag gtcttcgtgg gcaagatccc gcgcgacgtg
540
tacgaggacg agctggtgcc cgtgttcgag gccgtgggccc gcatctacga gctgcgcctc
600
atgatggact ttgacggcaa gaaccgggc tacgccttcg tcatgtactg ccacaagcac
660
gaggccaagc gcgcagtgcm tgagctcaac aactacgaga tccgcccggg ccgcctgctc
720
ggcgtgtgct gcagcgtgga caactgccgc ctcttcacg gcgggatccc caagatgaag
780
aagcgcgagg aaatcctgga ggagattgcc aaggtcaccg agggcggtgct ggacgtgatc
840
gtctacgcca gcgcggccga caagatgaag aaccgggct tcgccttcgt ggagtacgag
900
agccaccgcm cggctgccat ggctcgccgc aagctcatgc ctggccgcat ccagctgtgg
960
ggccaccaga tcgccgtgga ctgggcccag cctgagatcm acgtggacga ggacgtgatg
1020
gagaccgtga agatcctcta cgtgcgcaac ctcatgatcm agaccaccga ggacaccatc
1080
aagaagagct tcggccagtt caacccggc tgcgtggagc gcgtcaagaa gatccgcmac
1140
tacgccttcg tgcaactcac cagccgcgag gatgccgtgc atgccatgaa caacctcaac
1200
ggcactgagc tggagggctc gtgcctggag gtcacgctgg ccaagcccgt ggacaaggag
1260
cagtactcgc gctaccagaa ggagccagg ggcgggcgcm cggctgaggc agcgcagcag
1320

cccagctacg tgtactcctg cgacccctac aactggcct actacggcta cccctacaac
1380
gcgctcattg ggcccaacag ggactacttt gtgaaagcag gcagcataag aggccgaggg
1440
cgaggtgcag ctggcaacag agccccaggg cctaggggtt cctacctcgg gggatattct
1500
gctggccgtg gtatatatag ccgatatcat gaagggaaag gaaagcagca agaaaaagga
1560
tatgaactgg tgccgaattt ggaaatccct accgtcaacc cagttgccat taaacctggg
1620
acagtagcca tccctgccat tggggctcag tattccatgt ttccagcagc tccagccct
1680
aaaatgattg aagatggcaa aatccacaca gtggagcaca tgatcagccc cattgctgtg
1740
cagccagacc cagccagtgc tgctgccgcc gcagccgcgg ccgcagccgc cgcagccgt
1800
gtcattccca ctgtgtcgac gccaccacct ttccagggcc gcccaataac tccagtatac
1860
acggtggctc caaacgttca gagaattcct actgccggga tctacggggc cagttacgtg
1920
ccatttgctg ctccagctac agccacgac gccacactac agaagaacgc ggcagccgcg
1980
gccgccgtgt atggaggata cgcaggctac atacctcagg ccttccctgc tgctgccatt
2040
caggtcccca tccccgacgt ctaccagaca tactgaggct ggtgaccagc acgaagacag
2100
accacacaaa caccactgaa ggaacgcttg actatttatg aagaaggaac atgttggatt
2160
cacacatgca acctgaaagt gaagaatgtt agcagattta tttctgaatt attttatata
2220
catgaagttt tcaactagtt tttaagacta ttttcaactt agcatgccta cgttcataca
2280
tttccaaaag acttgcaatg gttcgtgcct tcattccatc ttttaaaaat ttgtatgctg
2340
tactacattt gtatagaggt ttttggtgtt gtttttttaa ggatatattt tcagtatgaa
2400
ggttattttc ttaacttctg cactccagag atttctattt tgtagtacct tcaataatat
2460
atcaactata tattaataaaa gcacacttga ggagctaggg aactattttg aaaaatatat
2520
acaatattta aagatacaaa cagtagtgct taaaaatact acataaagca ttattttaaa
2580
ggttatactg gaaagtgcaa ttttaaaatg agtaaacct ctgtatttct gctggcatta
2640
agggttgatg gtgttaccat gtatcatcat ggcggtacta ttttttaaaa gaaattaaac
2700
actggtctc tccttaagcc aacattgaaa agacttgccg cacttctgag tccaaacact
2760
ggaaagctct cctttgccac cggttagccgg ggctcattct ccatgtgcct tagccttaaa
2820
catgccccca ctcccacatc tctcaccctg tccccctcct cccagattcc caatcccacc
2880
gcaatgtttg gcaagcctag gactgataag tagctctgat agaggagctg gtggctttta
2940

tactttcttcc tgggtttttg ttggggtttg ttgtttcggt gttttttggt ttttttttgg
 3000
 tttggttggg gaagtattgt cttctacgtg tgccattttc agtagcagag taagct
 3056

<210> 5532
 <211> 593
 <212> PRT
 <213> Homo sapiens

<400> 5532
 Met Thr Ala Glu Asp Ser Thr Ala Ala Met Ser Ser Asp Ser Ala Ala
 1 5 10 15
 Gly Ser Ser Ala Lys Val Pro Glu Gly Val Ala Gly Ala Pro Asn Glu
 20 25 30
 Ala Ala Leu Leu Ala Leu Met Glu Arg Thr Gly Tyr Ser Met Val Gln
 35 40 45
 Glu Asn Gly Gln Arg Lys Tyr Gly Gly Pro Pro Pro Gly Trp Glu Gly
 50 55 60
 Pro His Pro Gln Arg Gly Cys Glu Val Phe Val Gly Lys Ile Pro Arg
 65 70 75 80
 Asp Val Tyr Glu Asp Glu Leu Val Pro Val Phe Glu Ala Val Gly Arg
 85 90 95
 Ile Tyr Glu Leu Arg Leu Met Met Asp Phe Asp Gly Lys Asn Arg Gly
 100 105 110
 Tyr Ala Phe Val Met Tyr Cys His Lys His Glu Ala Lys Arg Ala Val
 115 120 125
 Arg Glu Leu Asn Asn Tyr Glu Ile Arg Pro Gly Arg Leu Leu Gly Val
 130 135 140
 Cys Cys Ser Val Asp Asn Cys Arg Leu Phe Ile Gly Gly Ile Pro Lys
 145 150 155 160
 Met Lys Lys Arg Glu Glu Ile Leu Glu Glu Ile Ala Lys Val Thr Glu
 165 170 175
 Gly Val Leu Asp Val Ile Val Tyr Ala Ser Ala Ala Asp Lys Met Lys
 180 185 190
 Asn Arg Gly Phe Ala Phe Val Glu Tyr Glu Ser His Arg Ala Ala Ala
 195 200 205
 Met Ala Arg Arg Lys Leu Met Pro Gly Arg Ile Gln Leu Trp Gly His
 210 215 220
 Gln Ile Ala Val Asp Trp Ala Glu Pro Glu Ile Asp Val Asp Glu Asp
 225 230 235 240
 Val Met Glu Thr Val Lys Ile Leu Tyr Val Arg Asn Leu Met Ile Glu
 245 250 255
 Thr Thr Glu Asp Thr Ile Lys Lys Ser Phe Gly Gln Phe Asn Pro Gly
 260 265 270
 Cys Val Glu Arg Val Lys Lys Ile Arg Asp Tyr Ala Phe Val His Phe
 275 280 285
 Thr Ser Arg Glu Asp Ala Val His Ala Met Asn Asn Leu Asn Gly Thr
 290 295 300
 Glu Leu Glu Gly Ser Cys Leu Glu Val Thr Leu Ala Lys Pro Val Asp
 305 310 315 320
 Lys Glu Gln Tyr Ser Arg Tyr Gln Lys Ala Ala Arg Gly Gly Gly Ala
 325 330 335
 Ala Glu Ala Ala Gln Gln Pro Ser Tyr Val Tyr Ser Cys Asp Pro Tyr

```

      340      345      350
Thr Leu Ala Tyr Tyr Gly Tyr Pro Tyr Asn Ala Leu Ile Gly Pro Asn
      355      360      365
Arg Asp Tyr Phe Val Lys Ala Gly Ser Ile Arg Gly Arg Gly Arg Gly
      370      375      380
Ala Ala Gly Asn Arg Ala Pro Gly Pro Arg Gly Ser Tyr Leu Gly Gly
      385      390      395      400
Tyr Ser Ala Gly Arg Gly Ile Tyr Ser Arg Tyr His Glu Gly Lys Gly
      405      410      415
Lys Gln Gln Glu Lys Gly Tyr Glu Leu Val Pro Asn Leu Glu Ile Pro
      420      425      430
Thr Val Asn Pro Val Ala Ile Lys Pro Gly Thr Val Ala Ile Pro Ala
      435      440      445
Ile Gly Ala Gln Tyr Ser Met Phe Pro Ala Ala Pro Ala Pro Lys Met
      450      455      460
Ile Glu Asp Gly Lys Ile His Thr Val Glu His Met Ile Ser Pro Ile
      465      470      475      480
Ala Val Gln Pro Asp Pro Ala Ser Ala Ala Ala Ala Ala Ala Ala
      485      490      495
Ala Ala Ala Ala Ala Ala Val Ile Pro Thr Val Ser Thr Pro Pro Pro
      500      505      510
Phe Gln Gly Arg Pro Ile Thr Pro Val Tyr Thr Val Ala Pro Asn Val
      515      520      525
Gln Arg Ile Pro Thr Ala Gly Ile Tyr Gly Ala Ser Tyr Val Pro Phe
      530      535      540
Ala Ala Pro Ala Thr Ala Thr Ile Ala Thr Leu Gln Lys Asn Ala Ala
      545      550      555      560
Ala Ala Ala Ala Val Tyr Gly Gly Tyr Ala Gly Tyr Ile Pro Gln Ala
      565      570      575
Phe Pro Ala Ala Ala Ile Gln Val Pro Ile Pro Asp Val Tyr Gln Thr
      580      585      590
Tyr

```

<210> 5533
 <211> 505
 <212> DNA
 <213> Homo sapiens

```

<400> 5533
ncacttgccct ccctgcctgc ttctggctgc cttgaatgcc tggtccttca agtccttct
60
gggtctgaca aagcagggac catgtctacc tttggctacc gaagaggact cagtaaatac
120
gaatccatcg acgaggatga actcctcgcc tccctgtcag ccgaggagct gaaggagcta
180
gagagagagt tggaagacat tgaacctgac cgcaaccttc ccgtggggct aaggcaaaag
240
agcctgacag agaaaacccc cacagggaca ttcagcagag aggcaactgat ggcctattgg
300
gaaaaggagt cccaaaaact cttggagaag gagaggctgg gggaatgtgg aaaggttgca
360
gaagacaaag aggaaagtga ggaagagctt atctttactg aaagtaacag tgaggtttct
420

```

gaggaagtgt atacagagga ggaggaggag gagtcccagg aggaagagga ggaagaagac
 480
 agtgacgaag aggaaagaac aattg
 505

<210> 5534
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 5534
 Xaa Leu Ala Ser Leu Pro Ala Ser Gly Cys Leu Glu Cys Leu Val Leu
 1 5 10 15
 Gln Ala Pro Ser Gly Ser Asp Lys Ala Gly Thr Met Ser Thr Phe Gly
 20 25 30
 Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile Asp Glu Asp Glu Leu
 35 40 45
 Leu Ala Ser Leu Ser Ala Glu Glu Leu Lys Glu Leu Glu Arg Glu Leu
 50 55 60
 Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val Gly Leu Arg Gln Lys
 65 70 75 80
 Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe Ser Arg Glu Ala Leu
 85 90 95
 Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu Leu Glu Lys Glu Arg
 100 105 110
 Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys Glu Glu Ser Glu Glu
 115 120 125
 Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val Ser Glu Glu Val Tyr
 130 135 140
 Thr Glu Glu Glu Glu Glu Glu Ser Gln Glu Glu Glu Glu Glu Asp
 145 150 155 160
 Ser Asp Glu Glu Glu Arg Thr Ile
 165

<210> 5535
 <211> 1887
 <212> DNA
 <213> Homo sapiens

<400> 5535
 ngcacgagcc gagccttctc agaccgggg gacgcctaac cccgcgagat gaggaaactg
 60
 aggccgcgag agccgcacac agcagagaag cagcagaatc gggaatcaaa cccagctctg
 120
 tctgacccca gagcctgtgc ctttaaccac tggctaggct gaactgcctt tgttcttcac
 180
 tgtccccatc acctctttca aacctcagcc tctccttcct catcggtaca tctctaggct
 240
 gcacctgctc tctaaacatt cacacaaacc ctgcaaattt tcttctcat aattggggaga
 300
 agactcactg gccgaatggc agcagtagat gacttgcaat ttgaagaatt tggcaatgca
 360
 gccacttctc tgacagcaaa cccagatgcc accacagtaa acattgagga tcttggtgaa
 420

accccaaaac atcagccagg atccccaaga ggctcaggaa gagaagaaga tgatgagtta
480
ctgggaaatg atgactctga caaaactgag ttacttgctg gacagaagaa aagctcccc
540
ttctggacat ttgaatacta ccaaacattc tttgatgtgg acacctacca ggtctttgac
600
agaattaaag gatctctttt gccaataccc gggaaaaact ttgtgagggtt atatatccgc
660
agcaatccag atctctatgg ccccttttgg atatgtgcca cggttggtctt tgccatagca
720
attagtggga atctttccaa cttcttgatc catctgggag agaagacgta ccattatgtg
780
cccgaattcc gaaaagtgtc catagcagct accatcatct atgcctatgc ctggctgggt
840
cctcttgac tctgggggtt cctcatgtgg agaaacagca aagttatgaa catcgtctcc
900
tattcatttc tggagattgt gtgtgtctat ggatattccc tcttcattta tatccccacc
960
gcaatactgt ggattatccc ccagaaagct gttcgttgga ttctagtcac gattgccctg
1020
ggcatctcag gatctctctt ggcaatgaca ttttggccag ctgttcgtga ggataaccga
1080
cgcgttgcat tggccacaat tgtgacaatt gtgttgctcc atatgctgct ttctgtgggc
1140
tgcttggcat acttttttga tgcaccagag atggaccatc tcccaacaac tacagctact
1200
ccaaacaaa cagttgctgc agccaagtcc agctaagag gaaagactca cttgagatac
1260
cctctccttg ctgaagtttt tcttgacttc tccagttctc ttttgttttt tggagcatgg
1320
ttctttggga agtggcatcc actgcaggaa agcagaatga gcagagccag cagaactgat
1380
ggagtggcac aaattcccag tgtctggatg gtgccacact ggcgcctaata caccggttta
1440
acaagcagaa attaaatggt gctcagcaca tgtgtctttc agctcttcct tttcaccat
1500
ggatgatcat tgcgagcatg cgctgattgg actgaaatgc cggggaatag gttaggcatg
1560
ctcagtgcg tccctttgcc accacagtca aatgacatgc ttcactgtgg taccttaata
1620
cctgaaatag aaccatggaa aattctgatg tcctctctct gaattatgta cagactacct
1680
gggggaccc cttctctcca aatgttagcc atcctgaagt agccgaacag tagaaacttt
1740
ggtggggatt aaccgggagc ttgaaaattt gtctttggta acctgatact ggacagctga
1800
actgaatggc tgcaaaataa atacctcaca tgatgtctgt gtctgcaaaa aaaaaaaaaa
1860
aaaaaaaaa aaaaaaaaaa aaaaaaa
1887

<210> 5536

<211> 306

<212> PRT

<213> Homo sapiens

<400> 5536

```

Met Ala Ala Val Asp Asp Leu Gln Phe Glu Glu Phe Gly Asn Ala Ala
 1           5           10           15
Thr Ser Leu Thr Ala Asn Pro Asp Ala Thr Thr Val Asn Ile Glu Asp
      20           25           30
Pro Gly Glu Thr Pro Lys His Gln Pro Gly Ser Pro Arg Gly Ser Gly
      35           40           45
Arg Glu Glu Asp Asp Glu Leu Leu Gly Asn Asp Asp Ser Asp Lys Thr
      50           55           60
Glu Leu Leu Ala Gly Gln Lys Lys Ser Ser Pro Phe Trp Thr Phe Glu
65           70           75           80
Tyr Tyr Gln Thr Phe Phe Asp Val Asp Thr Tyr Gln Val Phe Asp Arg
      85           90           95
Ile Lys Gly Ser Leu Leu Pro Ile Pro Gly Lys Asn Phe Val Arg Leu
      100          105          110
Tyr Ile Arg Ser Asn Pro Asp Leu Tyr Gly Pro Phe Trp Ile Cys Ala
      115          120          125
Thr Leu Val Phe Ala Ile Ala Ile Ser Gly Asn Leu Ser Asn Phe Leu
      130          135          140
Ile His Leu Gly Glu Lys Thr Tyr His Tyr Val Pro Glu Phe Arg Lys
145          150          155          160
Val Ser Ile Ala Ala Thr Ile Ile Tyr Ala Tyr Ala Trp Leu Val Pro
      165          170          175
Leu Ala Leu Trp Gly Phe Leu Met Trp Arg Asn Ser Lys Val Met Asn
      180          185          190
Ile Val Ser Tyr Ser Phe Leu Glu Ile Val Cys Val Tyr Gly Tyr Ser
      195          200          205
Leu Phe Ile Tyr Ile Pro Thr Ala Ile Leu Trp Ile Ile Pro Gln Lys
      210          215          220
Ala Val Arg Trp Ile Leu Val Met Ile Ala Leu Gly Ile Ser Gly Ser
225          230          235          240
Leu Leu Ala Met Thr Phe Trp Pro Ala Val Arg Glu Asp Asn Arg Arg
      245          250          255
Val Ala Leu Ala Thr Ile Val Thr Ile Val Leu Leu His Met Leu Leu
      260          265          270
Ser Val Gly Cys Leu Ala Tyr Phe Phe Asp Ala Pro Glu Met Asp His
      275          280          285
Leu Pro Thr Thr Thr Ala Thr Pro Asn Gln Thr Val Ala Ala Ala Lys
      290          295          300
Ser Ser
305

```

<210> 5537

<211> 2881

<212> DNA

<213> Homo sapiens

<400> 5537

```

gcctgcctct tccagagaga ctccccatt gctgtctctt gtgtgtgtca tgcacaagga
60
aggcttggtt gtgtgccagg ataaggggca caagggcctc ggggtgtggc agagacccca
120

```


tgcttaagct tttatgggat aggtcaggct gcagggggtt gagggcctca gttgtatatc
180
agaatcttca gagcactgcg atgttcaggg gtgagtcagg tctgtagatg tgcacggggg
240
cttctgaagg gtcagtttct gtaatcactt tcaggtgtgt cagggccttg tgcagtaaca
300
gtgcacacag aagttagtgt ttctgtgggc taagggttgt agctctgtat caggattctg
360
ggagtgggtc tggatttctg gtgtgtggac ttaagaagct gtgtcagact tgggggaggg
420
gcgttcatgt ataactgggt tcacataggc caagactccc aggtgcattt taggcagagc
480
ctcaggtgtg ttagagggtc caggggcaga gaggtatag gtgctgtcag aggccttggg
540
gacatttagg gcagagcctc gagtgcaggg tcctgggaca gtgggagcca agggcaagtg
600
ctagagttgc agtgaattta gagcaaagcc tcagctaagt gacacatccc agggcagtag
660
gggatctatc taggttcgtg ctgggcctca ggtaagtgc aggccttagg acaatggggg
720
ctgtggcatg cgtcaggtta cctgccttga tatgggatcg tgacaggccc ctccctatgt
780
gcaggagaca agcagcccaa gaaacaggag aaaaaccag tgttggtgtc cccagagttt
840
gtggatgaag ctctgtgtgc gtgcgaggag taccttagca acttggccca catggacatc
900
gacaaggacc tggaggcccc gctgtacctc acccccgagg gctggtccct cttcctccag
960
cgctactacc aagtgggtcca cgaaggggca gaactcaggc acctcgacac tcaggtccag
1020
cgctgtgagg acatcctgca gcagctgcag gccgtggtac cccagataga catggaaggg
1080
gatcgcaaca tctggatcgt gaagccagga gccaaagtccc gtggacgagg catcatgtgc
1140
atggaccacc tggaggagat gctgaagctg gtgaacggca acccctggt gatgaaggac
1200
ggcaagtggg tgggtgcagaa gtatattgag cggccctcc tcatctttgg caccaagttt
1260
gacctcagac agtgggttct ggtaactgac tggaaaccac ttaccgtgtg gttctaccgc
1320
gacagctata tccgcttttc cagcagccc ttctccctga agaacctgga caactcagtg
1380
cacctgtgca acaactccat ccagaagcac ctggagaact catgccatcg gcatccactg
1440
cttccgccag acaacatgtg gtctagccag aggttccagg cccacctgca ggagatgggt
1500
gccccaaatg cttggtccac catcatcgtg cctggcatga aggatgctgt gatccacgca
1560
cttcagacct cccaggacac cgtgcagtgt cgggaaggcca gctttgagct ctatggcgct
1620
gacttcgtgt tcggggagga cttccagccc tggctgattg agatcaacgc cagccccacg
1680
atggcaccct ccacagcagt cactgcccgg ctctgtgctg gcgtgcaagc tgacaccctg
1740

cgcggtggtca ttgaccggag gctggaccgc aactgtgaca caggagcctt tgagctcatc
 1800
 tataagcagc ccgtcaccac ttccccagcc tccacaccaa ggcccagctg ctttctcccc
 1860
 atgtactccg acaccagggc caggtcctca gacgacagca cagcaagctg gtgggcacta
 1920
 aggcctgtgc gaccacaggc aaggccttga ggactctacc cacggctaag gtcttcattt
 1980
 cctccccacc gaaccttgat ttcaagggtg caccagcat cctgaagcca agaaagggtg
 2040
 gcctcgacct gtgactcaca ccagtgagc agtgctgagc acggggtcag ggctggaggg
 2100
 cacaggcaga gggcagctcc caggctggct ggcaccccaa gggaagagct ggtctccctc
 2160
 agaagccct tctccacag acttctgatc atctccctct tctccctcc tttcacaccg
 2220
 aggtcctgc tctcctgtgc ctccaggcc ccagctgga agtgccctgt tgctctgcc
 2280
 ctttgaagtc ggaacaattc ctagcacctg tcggaaggtc aaggccaaag gcaaattcaa
 2340
 ggccagactg tgacaaacc agggctgagg cctgccccat gaagaggctg agccccctga
 2400
 aaccctgcc cctgttgggt acattccaga ggcgcagggg cctgggggat atgaagctag
 2460
 ggaagccct gcttcgattc cccactgcc ttgtcctgga tccaacacca aataaaaaga
 2520
 aacaagtga gtatttgggg cttgactcca ttgctgttg agggtaaga gtggatgggg
 2580
 cgaggccgtg taccacagg tccacagcaa gagcctgagg ccatcagcag ctctccgtg
 2640
 cagcgaggcc cagaattccc acctaaaggac agacatgggg cttcctattt agggactccc
 2700
 ccagcatctc cgatccagg gtggggagcg tgagccttca ctttacagat gaagaaactg
 2760
 agtctgaaag aggaggcatg gcttacccta gatcagtg cagtgagtc acgcagggag
 2820
 atattgccag aactgccgag cactgggagc cccccaacc cagagaacaa gccaagctag
 2880
 c
 2881

<210> 5538

<211> 352

<212> PRT

<213> Homo sapiens

<400> 5538

Met	Asp	Ile	Asp	Lys	Asp	Leu	Glu	Ala	Pro	Leu	Tyr	Leu	Thr	Pro	Glu
1				5					10					15	
Gly	Trp	Ser	Leu	Phe	Leu	Gln	Arg	Tyr	Tyr	Gln	Val	Val	His	Glu	Gly
			20					25					30		
Ala	Glu	Leu	Arg	His	Leu	Asp	Thr	Gln	Val	Gln	Arg	Cys	Glu	Asp	Ile
		35					40					45			
Leu	Gln	Gln	Leu	Gln	Ala	Val	Val	Pro	Gln	Ile	Asp	Met	Glu	Gly	Asp

50	55	60
Arg Asn Ile Trp Ile Val Lys Pro Gly Ala Lys Ser Arg Gly Arg Gly		
65	70	75
Ile Met Cys Met Asp His Leu Glu Glu Met Leu Lys Leu Val Asn Gly		80
	85	90
Asn Pro Val Val Met Lys Asp Gly Lys Trp Val Val Gln Lys Tyr Ile		95
	100	105
Glu Arg Pro Leu Leu Ile Phe Gly Thr Lys Phe Asp Leu Arg Gln Trp		110
	115	120
Phe Leu Val Thr Asp Trp Asn Pro Leu Thr Val Trp Phe Tyr Arg Asp		125
	130	135
Ser Tyr Ile Arg Phe Ser Thr Gln Pro Phe Ser Leu Lys Asn Leu Asp		140
145	150	155
Asn Ser Val His Leu Cys Asn Asn Ser Ile Gln Lys His Leu Glu Asn		160
	165	170
Ser Cys His Arg His Pro Leu Leu Pro Pro Asp Asn Met Trp Ser Ser		175
	180	185
Gln Arg Phe Gln Ala His Leu Gln Glu Met Gly Ala Pro Asn Ala Trp		190
	195	200
Ser Thr Ile Ile Val Pro Gly Met Lys Asp Ala Val Ile His Ala Leu		205
	210	215
Gln Thr Ser Gln Asp Thr Val Gln Cys Arg Lys Ala Ser Phe Glu Leu		220
225	230	235
Tyr Gly Ala Asp Phe Val Phe Gly Glu Asp Phe Gln Pro Trp Leu Ile		240
	245	250
Glu Ile Asn Ala Ser Pro Thr Met Ala Pro Ser Thr Ala Val Thr Ala		255
	260	265
Arg Leu Cys Ala Gly Val Gln Ala Asp Thr Leu Arg Val Val Ile Asp		270
	275	280
Arg Arg Leu Asp Arg Asn Cys Asp Thr Gly Ala Phe Glu Leu Ile Tyr		285
	290	295
Lys Gln Pro Val Thr Thr Ser Pro Ala Ser Thr Pro Arg Pro Ser Cys		300
305	310	315
Leu Leu Pro Met Tyr Ser Asp Thr Arg Ala Arg Ser Ser Asp Asp Ser		320
	325	330
Thr Ala Ser Trp Trp Ala Leu Arg Pro Cys Arg Pro Gln Ala Arg Pro		335
	340	345
		350

<210> 5539

<211> 1887

<212> DNA

<213> Homo sapiens

<400> 5539

nntttagaag gttagtgttg gttcttgtat tcgattaaac aggaatacac atatgtctac
 60
 caaagaatag gtaagggaga aataagaaca ctaaaaaaac tcggaatcgt taagtgtgaa
 120
 gcatatttgg agttaaaaga accaaatatt actaagtaag cagacgcggg cacgcgctgc
 180
 ataccgggat ttgtagtccc ttccggggcg gggtagacgc cgcttgcgca gaggggcccgt
 240
 cgctcttccg ggcgcagtcg tgcggcagcg gcgccaggac tgactgcgcc gtggaggctg
 300

ctgcagtgtt gtgagttgga agctggggag ctggcatgg cggccccgc tgcagccatg
360
gggccctcgg cgttgggcca gagcgcccc ggctcgatgg ccccggtgtg ctcaagtgagc
420
agcggccccgt cgcgctacgt gcttgggatg caggagctgt tccggggcca cagcaagacg
480
cgcgagttcc tggcgcacag cgccaaggtg cactcgggtg cctggagttg cgacgggcgt
540
cgcctagcct cggggtcctt cgacaagacg gccagcgtct tcttgctgga gaggaccggt
600
tgggtcaaaga aaacaattat cggggacatg gggatangtg tggaccagct ttgttggcat
660
ccaagtaatc ctgacctatt tgttacggcg tccggagata aaaccattcg catctgggat
720
gtgaggacta caaatgcat tgccactgtg aacactaaag gggagaacat taatatctgc
780
tggagtcctg atgggcagac cattgctgta ggcaacaagg atgatgtggt gacctttatt
840
gatgccaaaga cacaccgttc caaagcagaa gagcagttca agttcgaggt caacgaaatc
900
tcttgaaca atgacaataa tatgttcttc ctgacaaatg gcaatgggtg tatcaacatc
960
ctcagctacc cagaactgaa gcctgtgcag tccatcaacg cccatccttc caactgcac
1020
tgtatcaagt ttgaccccat ggggaagtac tttgccacag gaagtgcaga tgctttggtc
1080
agcctctggg atgtggatga gttagtgtgt gttcgggtgct tttccaggct ggattggcct
1140
gtaagaaccc tcagtttcag ccatgatggg aaaatgctgg cgtcagcatc ggaagatcat
1200
tttattgaca ttgctgaagt ggagacaggg gacaaactat gggagggtaca gtgtgagtc
1260
ccgaccttca cagtggcgtg gcaccccaaa aggcctctgc tggcatttgc ctgtgatgac
1320
aaagacggca aatatgacag cagccgggaa gccggaactg tgaagctgtt tgggcttcct
1380
aatgattctt gagaggaggt tgtagggaga ggaggccccg gcagaggctt tccttcatgt
1440
ggttagtttg gtctgttctc tcggagttgg tgggcaccct aaatatttgt aagttggat
1500
aaattgtaaa cgtctctggt caggctgcgc atttcgttct tttgctttgt ctgtgtatta
1560
gctctttcca ttctttgccc ccagcatgag ttaactcgcg tggactctgc agtgcgagta
1620
gtgacccag cataccttgt cctctggacc tcctgtcttc tctgcttctg ggtgcatggt
1680
agactttgtg gcatttgata caacttgac aatacctagt ttggaggag gggaatggaa
1740
gggcatggaa gtttttttaa ataattaaaa aaatatatat ataattttga gaattgagca
1800
tttaataaac tgacttttgt tattatggaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1860
aaaaaaaaaa aaaaaaaaaa aaaaaa
1887

<210> 5540
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 5540
 Met Arg Ala Ala Ala Pro Gly Leu Thr Ala Pro Trp Arg Leu Leu
 1 5 10 15
 Gln Cys Cys Glu Leu Glu Ala Gly Glu Leu Gly Met Ala Val Pro Ala
 20 25 30
 Ala Ala Met Gly Pro Ser Ala Leu Gly Gln Ser Gly Pro Gly Ser Met
 35 40 45
 Ala Pro Trp Cys Ser Val Ser Ser Gly Pro Ser Arg Tyr Val Leu Gly
 50 55 60
 Met Gln Glu Leu Phe Arg Gly His Ser Lys Thr Arg Glu Phe Leu Ala
 65 70 75 80
 His Ser Ala Lys Val His Ser Val Ala Trp Ser Cys Asp Gly Arg Arg
 85 90 95
 Leu Ala Ser Gly Ser Phe Asp Lys Thr Ala Ser Val Phe Leu Leu Glu
 100 105 110
 Arg Thr Gly Trp Ser Lys Lys Thr Ile Ile Gly Asp Met Gly Ile Xaa
 115 120 125
 Val Asp Gln Leu Cys Trp His Pro Ser Asn Pro Asp Leu Phe Val Thr
 130 135 140
 Ala Ser Gly Asp Lys Thr Ile Arg Ile Trp Asp Val Arg Thr Thr Lys
 145 150 155 160
 Cys Ile Ala Thr Val Asn Thr Lys Gly Glu Asn Ile Asn Ile Cys Trp
 165 170 175
 Ser Pro Asp Gly Gln Thr Ile Ala Val Gly Asn Lys Asp Asp Val Val
 180 185 190
 Thr Phe Ile Asp Ala Lys Thr His Arg Ser Lys Ala Glu Glu Gln Phe
 195 200 205
 Lys Phe Glu Val Asn Glu Ile Ser Trp Asn Asn Asp Asn Asn Met Phe
 210 215 220
 Phe Leu Thr Asn Gly Asn Gly Cys Ile Asn Ile Leu Ser Tyr Pro Glu
 225 230 235 240
 Leu Lys Pro Val Gln Ser Ile Asn Ala His Pro Ser Asn Cys Ile Cys
 245 250 255
 Ile Lys Phe Asp Pro Met Gly Lys Tyr Phe Ala Thr Gly Ser Ala Asp
 260 265 270
 Ala Leu Val Ser Leu Trp Asp Val Asp Glu Leu Val Cys Val Arg Cys
 275 280 285
 Phe Ser Arg Leu Asp Trp Pro Val Arg Thr Leu Ser Phe Ser His Asp
 290 295 300
 Gly Lys Met Leu Ala Ser Ala Ser Glu Asp His Phe Ile Asp Ile Ala
 305 310 315 320
 Glu Val Glu Thr Gly Asp Lys Leu Trp Glu Val Gln Cys Glu Ser Pro
 325 330 335
 Thr Phe Thr Val Ala Trp His Pro Lys Arg Pro Leu Leu Ala Phe Ala
 340 345 350
 Cys Asp Asp Lys Asp Gly Lys Tyr Asp Ser Ser Arg Glu Ala Gly Thr
 355 360 365
 Val Lys Leu Phe Gly Leu Pro Asn Asp Ser

370

375

<210> 5541

<211> 1854

<212> DNA

<213> Homo sapiens

<400> 5541

nncgagctgg cagctccagg ctccggagcc atgccctgca cggaccctcg tctttaccac
60
gctcctgagg aatgaaagga acccagggac cctcagaagg cagcagtgat gcggaccaac
120
cccccgagc ctgcaccctt ccgagggcca taggcgaccc agggaaactgg agagagctcc
180
agaaaggaaa tcccagcttt cccaaagtcc ctgtggatgc tgacaaaagg agacctgaat
240
ttttggaaga gcctgtacta gggtaccgg ctgcagagtg attttccct ccggcactga
300
ctctccccct ccaaccccc gccgtccaga gtaccatgaa gaattatgag gatgtgtgac
360
agaggtatcc agatgttgat caccactgta ggagcctttg ccgcttttag tttaatgacc
420
attgcagtgg gcacggacta ctggttatat tccagaggtg tgtgcaggac taaatctaca
480
agtgataatg aaaccagcag gaagaatgaa gaagtaatga cccattcggg gctgtggagg
540
acctgctgcc tagaaggggc tttccgaggc gtgtgcaaga aaatcgatca cttccctgaa
600
gatgctgact acgaacagga cacagccgaa tatctcctgc gagctgtgag ggcctccagt
660
gtcttcccca tctcagtggt cacgctgctg ttcttcggcg ggctctgcgt ggcagccagt
720
gagttccacc gcagcagaca caacgtcatt ctcagcgcg gcatcttttt tgtctctgca
780
gggttaagca acatcattgg catcatagtt tatatatcag ccaacgccgg agaccccggg
840
cagcgtgact ccaaaaaaag ttactcctat gggttggtcct tttatttcgg agccttctct
900
ttcatcatcg cagaaattgt aggagtgggt gccgtgcaca tctatattga aaaacatcag
960
cagttacgag ccaaattcca ctccggagttc ctgaagaaat ctacttttgc ccgcctccca
1020
ccctacaggt atcgattccg gaggcgggtca agttctcgct ccaccgagcc cagatcccga
1080
gacctgtccc ccatcagcaa aggtttccac accatccctt cactgacat ctgatgttc
1140
acctctctcc gggacccctc aaagatcacc atggggaccc tcctcaactc cgaccgggac
1200
cacgcttttc tacagttcca caattccaca cccaaagagt tcaaagagtc actgcataat
1260
aatccggcca acaggcgac cacgcccgtc tgaactgacc tctgacctct gccccacgcc
1320
cagcacagcc ttgggggaag tgtacagaga tgtctctgag gttgcatggc atggtccttg
1380

tgatggtatt actttttaca aagaatgaaa ccaaattggac tcagccctct cccacatttt
 1440
 cccctcaccc tccaagtcct aaccctcca tctctcttaa cttttcaagc caatccctta
 1500
 atgtcattcc tctctctgtg tatctgtgcc agatgttttc ctttcttctt tctttactgg
 1560
 aaggacctcc acattcttcc ctccttgga gaggacttta ctaaaagtca cagggtggtg
 1620
 ccagggggga tttccgaatc tccatcaggc gcgctcatag ttgtcccat tgtctaccca
 1680
 cacaaatcct caggaaacca accaccgcc aggtggccct gagggaggca ttcaccttta
 1740
 tgtgttagaa aaacatgacc agaaatcaaa gatgtcagag ccccgagca gctaattgaa
 1800
 taagcactca tggtattaaa gggtttgcct tgtcgtaacc aaccgaaaaa aaaa
 1854

<210> 5542

<211> 315

<212> PRT

<213> Homo sapiens

<400> 5542

Met	Arg	Met	Cys	Asp	Arg	Gly	Ile	Gln	Met	Leu	Ile	Thr	Thr	Val	Gly
1			5					10						15	
Ala	Phe	Ala	Ala	Phe	Ser	Leu	Met	Thr	Ile	Ala	Val	Gly	Thr	Asp	Tyr
		20						25					30		
Trp	Leu	Tyr	Ser	Arg	Gly	Val	Cys	Arg	Thr	Lys	Ser	Thr	Ser	Asp	Asn
		35					40					45			
Glu	Thr	Ser	Arg	Lys	Asn	Glu	Glu	Val	Met	Thr	His	Ser	Gly	Leu	Trp
		50				55					60				
Arg	Thr	Cys	Cys	Leu	Glu	Gly	Ala	Phe	Arg	Gly	Val	Cys	Lys	Lys	Ile
65				70					75						80
Asp	His	Phe	Pro	Glu	Asp	Ala	Asp	Tyr	Glu	Gln	Asp	Thr	Ala	Glu	Tyr
			85					90						95	
Leu	Leu	Arg	Ala	Val	Arg	Ala	Ser	Ser	Val	Phe	Pro	Ile	Leu	Ser	Val
			100					105					110		
Thr	Leu	Leu	Phe	Phe	Gly	Gly	Leu	Cys	Val	Ala	Ala	Ser	Glu	Phe	His
		115					120					125			
Arg	Ser	Arg	His	Asn	Val	Ile	Leu	Ser	Ala	Gly	Ile	Phe	Phe	Val	Ser
	130					135					140				
Ala	Gly	Leu	Ser	Asn	Ile	Ile	Gly	Ile	Ile	Val	Tyr	Ile	Ser	Ala	Asn
145				150						155					160
Ala	Gly	Asp	Pro	Gly	Gln	Arg	Asp	Ser	Lys	Lys	Ser	Tyr	Ser	Tyr	Gly
			165						170					175	
Trp	Ser	Phe	Tyr	Phe	Gly	Ala	Phe	Ser	Phe	Ile	Ile	Ala	Glu	Ile	Val
		180						185					190		
Gly	Val	Val	Ala	Val	His	Ile	Tyr	Ile	Glu	Lys	His	Gln	Gln	Leu	Arg
		195				200						205			
Ala	Lys	Ser	His	Ser	Glu	Phe	Leu	Lys	Lys	Ser	Thr	Phe	Ala	Arg	Leu
	210					215					220				
Pro	Pro	Tyr	Arg	Tyr	Arg	Phe	Arg	Arg	Arg	Ser	Ser	Ser	Arg	Ser	Thr
225					230					235					240
Glu	Pro	Arg	Ser	Arg	Asp	Leu	Ser	Pro	Ile	Ser	Lys	Gly	Phe	His	Thr

```

<400> 5543
nntagggcag agctgggcct gcagctttag ggcctccttg cccctcctgc cgccaggagt
60
gcccggccgg atgaggcact tccctacagt gtgggtcccg tcggcagtgg cctgagggaa
120
cctgtgctgt gcgggctgcc cgaccacctt cccttcggtc tgatccccgc ctcaggcggc
180
cccctccctg gcatgctgct ggtgcccaag gctcaggggc tcgtggagat gctgcagacc
240
atctatgaga cagaatcctg tttctcagca gatgggatgt caggtcggga accatccttg
300
gaaatcctgc cgcggacttc tctgcacagc atccctgtga cagtggaggt gaagccgggtg
360
ctgccaaagag ccatgcccag ttccatgggg ggtggggggtg gaggcagccc cagccctgtg
420
gagctacggg gggctctggt gggctctgtg gaccccacac tgcgggagca gcaactgcag
480
caggagctcc tggcgctcaa gcagcagcag cagctgcaga agcagctcct gttcgtgag
540
ttccagaaac agcatgacca cctgacaagg cagcatgagg tccagctgca gaagcacctc
600
aagcagcagc aggagatgct ggcagccaag cagcagcagg agatgctggc agccaagcgg
660
cagcaggagc tggagcagca gcggcagcgg gagcagcagc ggcaggaaga gctggagaag
720
cagcggctgg agcagcagct gctcatcctg cggaacaagg agaagagcaa agagagtgcc
780
attgccagca ctgaggtaaa gctgaggctc caggaattcc tcttgctgaa gtcaaaggag
840
cccacaccag gcggcctcaa ccattccctc ccacagcacc ccaaagtctg gggagcccac
900
catgcttctt tggaccagag ttccctctcc cagagcggcc cccctgggac gcctccctcc
960
tacaaactgc ctttgcttgg gccctacgac agtcgagacg acttccccct ccgcaaaaaca
1020
gcctctgaac ccaacttgaa agtgcgttca aggctaaaac agaaggtggc tgagcggaga
1080
agcagtcctc tcctgcgtcg caaggatggg actgttatta gcacctttaa gaagagagct
1140

```


gttgagatca caggtgccgg gcctggggcg tcgtccgtgt gtaacagcgc acccggtcc
1200
ggccccagct ctcccaacag ctcccacagc accatcgctg agaatggctt tactgggtca
1260
gtccccaaca tccccactga gatgctccct cagcaccgag ccctccctct ggacagctcc
1320
cccaaccagt tcagcctcta cacgtctcct tctctgcca acatctccct agggctgcag
1380
gccacgggtca ctgtcaccaa ctcacacctc actgcctccc cgaagctgtc gacacagcag
1440
gaggccgaga ggcaggccct ccagtccttg cggcagggtg gcacgtgac cggcaagtcc
1500
atgagcacat cctctattcc tggctgcctg ctgggcgtgg cactggaggg cgacgggagc
1560
ccccacgggc atgcctccct gctgcagcat gtgctgttgc tggagcaggc ccggcagcag
1620
agcaccctca ttgctgtgcc actccacggg cagtccccac tagtgacggg tgaacgtgtg
1680
gccaccagca tgcggacggg aggcaagctc ccgcggcatc ggcccctgag ccgcactcag
1740
tcctcaccgc tgccgcagag tccccaggcc ctgcagcagc tggatcatgca acaacagcac
1800
cagcagttcc tggagaagca gaagcagcag cagctacagc tgggcaagat cctcaccaag
1860
acaggggagc tgcccaggca gccaccacc caccctgagg agacagagga ggagctgacg
1920
gagcagcagg aggtcttgct gggggaggga gccctgacca tgccccggga gggctccaca
1980
gagagtga gaacacagga agacctggag gaggaggacg aggaagagga tggggaggag
2040
gaggaggatt gcatccaggt taaggacgag gagggcgaga gtggtgctga ggagggggcc
2100
gacttggagg agcctgggtg tggatacaaa aaactgttct cagatgcca gccgtgcag
2160
cctttgcagg tgtaccaggc gccctcagc ctggccactg tgccccacca ggccctgggc
2220
cgtaccagct cctccctg tgccctggg ggcataaga gccccccaga ccagcccgctc
2280
aagcacctct tcaccacagg tgtggtctac gacacgttca tgctaaagca ccagtgcag
2340
tgcgggaaca cacacgtgca ccctgagcat gctggccgga tccagagcat ctggtcccgg
2400
ctgcaggaga caggcctgct tagcaagtgc gagcggatcc gaggtcgcaa agccacgcta
2460
gatgagatcc agacagtga ctctgaatac cacacctgc tctatgggac cagtcccctc
2520
aaccggcaga agctagacag caagaagttg ctcgcccca tcagccagaa gatgtatgct
2580
gtgctgcctt gtgggggcat cgggggtggac agtgacaccg tgtggaatga gatgcactcc
2640
tccagtgtg tgcgcatggc agtgggctgc ctgctggagc tggccttcaa ggtggctgca
2700
ggagagctca agaattgatt tgccatcatc cggcccccag gacaccagc cgaggaatcc
2760

acagccatgg gattctgctt cttcaactct gtagccatca ccgcaaaact cctacagcag
 2820
 aagttgaacg tgggcaaggt cctcatcgtg gactgggaca ttcacccatgg caatggcacc
 2880
 cagcaggcgt tctacaatga cccctctgtg ctctacatct ctctgcatcg ctatgacaac
 2940
 gggaacttct ttccaggctc tggggctcct gaagagggtg gtggaggacc aggcgtgggg
 3000
 tacaatgtga acgtggcatg gacaggaggt gtggaccccc ccattggaga cgtggaatac
 3060
 cttacagcct tcaggacagt ggtgatgccc attgcccacg agttctcacc tgatgtggtc
 3120
 ctagtctccg ctgggtttga tgctgttgaa ggacatctgt ctccactggg tggctactct
 3180
 gtcaccgcca gatgttttgg ccacttgacc aggcagctga tgaccctggc agggggccgg
 3240
 gtggtgctgg ccctggaggg aggccatgac ttgaccgcca tctgtgatgc ctctgaggct
 3300
 tgtgtctcgg ctctgctcag tgtagagctg cagcccttgg atgaggcagt cttgcagcaa
 3360
 aagcccaaca tcaacgcagt ggccacgcta gagaaagtca tcgagatcca gagcaaacac
 3420
 tggagctgtg tgcagaagtt cgccgctggg ctgggcccgt ccctgcgaga ggcccaagca
 3480
 ggtgagaccg aggaggccga gactgtgagc gccatggcct tgctgtcggg gggggccgag
 3540
 caggcccagg ctgcggcagc ccgggaacac agccccaggc cggcagagga gcccatggag
 3600
 caggagcctg ccctgtgacg ccccggtccc catccctctg ggcttcacca ttgtgatttt
 3660
 gtttattttt tctattaaaa aaaaaagtc acacattcaa caaggtgtgc cgtgtgggtc
 3720
 tctcagcctt gcccctcctg ctccctctacg ctgcctcagg cccccagccc tgtggcttcc
 3780
 acctcagctc tagaagcctg ctccctctgc aggggggtggg ggtgtcttcc cagccctgtc
 3840
 ccatgtgtcc ctccacccat tttcctgcat tctgtctgtc cttttcctcc ttggagcctg
 3900
 ggccagctca aggtgggcac gggggcccag acagtactct ccagttctgg ggccccccga
 3960
 gtgaggaggg aacgggaagt cggtgccttg gtttcagctg attttggggg gaaatgcctt
 4020
 a
 4021

<210> 5544

<211> 1141

<212> PRT

<213> Homo sapiens

<400> 5544

Met	Leu	Leu	Val	Pro	Lys	Ala	Gln	Gly	Leu	Val	Glu	Met	Leu	Gln	Thr
1				5				10					15		
Ile	Tyr	Glu	Thr	Glu	Ser	Cys	Phe	Ser	Ala	Asp	Gly	Met	Ser	Gly	Arg

	20						25						30					
Glu	Pro	Ser	Leu	Glu	Ile	Leu	Pro	Arg	Thr	Ser	Leu	His	Ser	Ile	Pro			
	35						40					45						
Val	Thr	Val	Glu	Val	Lys	Pro	Val	Leu	Pro	Arg	Ala	Met	Pro	Ser	Ser			
	50					55					60							
Met	Gly	Gly	Gly	Gly	Gly	Gly	Ser	Pro	Ser	Pro	Val	Glu	Leu	Arg	Gly			
65					70					75				80				
Ala	Leu	Val	Gly	Ser	Val	Asp	Pro	Thr	Leu	Arg	Glu	Gln	Gln	Leu	Gln			
			85					90					95					
Gln	Glu	Leu	Leu	Ala	Leu	Lys	Gln	Gln	Gln	Gln	Leu	Gln	Lys	Gln	Leu			
			100				105					110						
Leu	Phe	Ala	Glu	Phe	Gln	Lys	Gln	His	Asp	His	Leu	Thr	Arg	Gln	His			
	115					120					125							
Glu	Val	Gln	Leu	Gln	Lys	His	Leu	Lys	Gln	Gln	Gln	Glu	Met	Leu	Ala			
	130					135					140							
Ala	Lys	Gln	Gln	Gln	Glu	Met	Leu	Ala	Ala	Lys	Arg	Gln	Gln	Glu	Leu			
145					150					155					160			
Glu	Gln	Gln	Arg	Gln	Arg	Glu	Gln	Gln	Arg	Gln	Glu	Glu	Leu	Glu	Lys			
			165					170					175					
Gln	Arg	Leu	Glu	Gln	Gln	Leu	Leu	Ile	Leu	Arg	Asn	Lys	Glu	Lys	Ser			
			180				185					190						
Lys	Glu	Ser	Ala	Ile	Ala	Ser	Thr	Glu	Val	Lys	Leu	Arg	Leu	Gln	Glu			
	195					200					205							
Phe	Leu	Leu	Ser	Lys	Ser	Lys	Glu	Pro	Thr	Pro	Gly	Gly	Leu	Asn	His			
	210					215					220							
Ser	Leu	Pro	Gln	His	Pro	Lys	Cys	Trp	Gly	Ala	His	His	Ala	Ser	Leu			
225					230					235					240			
Asp	Gln	Ser	Ser	Pro	Pro	Gln	Ser	Gly	Pro	Pro	Gly	Thr	Pro	Pro	Ser			
			245					250					255					
Tyr	Lys	Leu	Pro	Leu	Pro	Gly	Pro	Tyr	Asp	Ser	Arg	Asp	Asp	Phe	Pro			
			260				265					270						
Leu	Arg	Lys	Thr	Ala	Ser	Glu	Pro	Asn	Leu	Lys	Val	Arg	Ser	Arg	Leu			
	275					280					285							
Lys	Gln	Lys	Val	Ala	Glu	Arg	Arg	Ser	Ser	Pro	Leu	Leu	Arg	Arg	Lys			
	290					295					300							
Asp	Gly	Thr	Val	Ile	Ser	Thr	Phe	Lys	Lys	Arg	Ala	Val	Glu	Ile	Thr			
305					310					315					320			
Gly	Ala	Gly	Pro	Gly	Ala	Ser	Ser	Val	Cys	Asn	Ser	Ala	Pro	Gly	Ser			
			325					330					335					
Gly	Pro	Ser	Ser	Pro	Asn	Ser	Ser	His	Ser	Thr	Ile	Ala	Glu	Asn	Gly			
			340				345					350						
Phe	Thr	Gly	Ser	Val	Pro	Asn	Ile	Pro	Thr	Glu	Met	Leu	Pro	Gln	His			
	355					360					365							
Arg	Ala	Leu	Pro	Leu	Asp	Ser	Ser	Pro	Asn	Gln	Phe	Ser	Leu	Tyr	Thr			
	370					375					380							
Ser	Pro	Ser	Leu	Pro	Asn	Ile	Ser	Leu	Gly	Leu	Gln</							

```

      450      455      460
Gln His Val Leu Leu Leu Glu Gln Ala Arg Gln Gln Ser Thr Leu Ile
465      470      475      480
Ala Val Pro Leu His Gly Gln Ser Pro Leu Val Thr Gly Glu Arg Val
      485      490      495
Ala Thr Ser Met Arg Thr Val Gly Lys Leu Pro Arg His Arg Pro Leu
      500      505      510
Ser Arg Thr Gln Ser Ser Pro Leu Pro Gln Ser Pro Gln Ala Leu Gln
      515      520      525
Gln Leu Val Met Gln Gln Gln His Gln Gln Phe Leu Glu Lys Gln Lys
      530      535      540
Gln Gln Gln Leu Gln Leu Gly Lys Ile Leu Thr Lys Thr Gly Glu Leu
545      550      555      560
Pro Arg Gln Pro Thr Thr His Pro Glu Glu Thr Glu Glu Glu Leu Thr
      565      570      575
Glu Gln Gln Glu Val Leu Leu Gly Glu Gly Ala Leu Thr Met Pro Arg
      580      585      590
Glu Gly Ser Thr Glu Ser Glu Ser Thr Gln Glu Asp Leu Glu Glu Glu
      595      600      605
Asp Glu Glu Glu Asp Gly Glu Glu Glu Glu Asp Cys Ile Gln Val Lys
      610      615      620
Asp Glu Glu Gly Glu Ser Gly Ala Glu Glu Gly Pro Asp Leu Glu Glu
625      630      635      640
Pro Gly Ala Gly Tyr Lys Lys Leu Phe Ser Asp Ala Gln Pro Leu Gln
      645      650      655
Pro Leu Gln Val Tyr Gln Ala Pro Leu Ser Leu Ala Thr Val Pro His
      660      665      670
Gln Ala Leu Gly Arg Thr Gln Ser Ser Pro Ala Ala Pro Gly Gly Met
      675      680      685
Lys Ser Pro Pro Asp Gln Pro Val Lys His Leu Phe Thr Thr Gly Val
      690      695      700
Val Tyr Asp Thr Phe Met Leu Lys His Gln Cys Met Cys Gly Asn Thr
705      710      715      720
His Val His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser Arg
      725      730      735
Leu Gln Glu Thr Gly Leu Leu Ser Lys Cys Glu Arg Ile Arg Gly Arg
      740      745      750
Lys Ala Thr Leu Asp Glu Ile Gln Thr Val His Ser Glu Tyr His Thr
      755      760      765
Leu Leu Tyr Gly Thr Ser Pro Leu Asn Arg Gln Lys Leu Asp Ser Lys
      770      775      780
Lys Leu Leu Gly Pro Ile Ser Gln Lys Met Tyr Ala Val Leu Pro Cys
785      790      795      800
Gly Gly Ile Gly Val Asp Ser Asp Thr Val Trp Asn Glu Met His Ser
      805      810      815
Ser Ser Ala Val Arg Met Ala Val Gly Cys Leu Leu Glu Leu Ala Phe
      820      825      830
Lys Val Ala Ala Gly Glu Leu Lys Asn Gly Phe Ala Ile Ile Arg Pro
      835      840      845
Pro Gly His His Ala Glu Glu Ser Thr Ala Met Gly Phe Cys Phe Phe
      850      855      860
Asn Ser Val Ala Ile Thr Ala Lys Leu Leu Gln Gln Lys Leu Asn Val
865      870      875      880
Gly Lys Val Leu Ile Val Asp Trp Asp Ile His His Gly Asn Gly Thr

```

```
<210> 5545
<211> 1932
<212> DNA
<213> Homo sapiens
```

4729

cttagtttgc ccaatacctc caaattcctg ggggtggcaca cctgaggttc aggtggcatg
480
actgagccac agtcacacat cccactgta ggataccacc acggttgggt taggttcag
540
cacatggcgg tcccggcctg gcctcttggg cccacctcac ctggtgacta gtgcagacca
600
ctctgttctt gcctgtttca ggcagcggag gaggagaaag agatggacct cccggactcg
660
gcctcgaggg tcttctgcgg cgcctcctg agcatggtga acacagatga tgtcaacgcc
720
atcatcctgg ccagaagaa catgctggac cgctttgaga agaccaatga gatgctgctc
780
aacttcaaca acctgtccag tgcccgctg cagcagatga gcgaacgctt cctgcaccac
840
acgaggacc tagtagagat gaaacgggac ctggacagca tcttcgccc tatcaggacg
900
ctgaaaggga aactggccag gcagcaccca gaggccttca gccatatccc agaggcatcc
960
ttctggagg aagaggatga agacccatc ccaccagca ccacgaccac cattgccacc
1020
tcagaacaga gcacgggctc atgtgacacc agcccgaca cgtctcgcc ctccctgagc
1080
cccggcttcg aggacctgac ccatgtccag cctggctccc cagccatcaa cggccgcagc
1140
cagacagatg acgaggagat gacgggagaa tagccctgct gcccggtgcc ttgaggggg
1200
ctcagggcag cagcatacaa ggtggcagcg ggtaaccctg ccttgttctg tcatccagg
1260
ctcctttgct gcccgttct gtcaccagc gctcctagg ggacaaggct ctctcccgag
1320
gggtgtggaa ttctggggg ggtctttaat tctggctcct tcttctctca gaacatctct
1380
attctgcaag acccctctgc catgccagg cagccatt ccagctggag tctggggct
1440
gggcacaggg gaatttttcc agagctgagc ctgacgtctg ctctgaagaa tgcttagaag
1500
gttcccagac accagagcca gatgtcccc accaccggtc aggacctcct tgaggtgcac
1560
aagcacggtc tctctgagt tcacccagc ccaccccgcc accactaat tctgcttttc
1620
ctgccccttg ctccgtaaaa gtatcaaata ctttctcctt ggtatctcaa ggaggtttct
1680
gagataggta gaagtcttga gacggaggct ggccatccat tcagccctga gcgtgctgag
1740
ttctgtgttt ctctgaatag aggtgtggaa cctgaggggc cagcaggcct ctctgaaggc
1800
ctccatggag caaacggagc cacctcggga aagagtttaa tggaatattt ttgtaccgga
1860
tgtttacaga tgctgttggg aagttatcaa taaaagaca ccattactaa aaaggga
1920
gtaaaaaaaa aa
1932

<210> 5546

<211> 183
 <212> PRT
 <213> Homo sapiens

<400> 5546
 Ala Ala Glu Glu Glu Lys Glu Met Asp Leu Pro Asp Ser Ala Ser Arg
 1 5 10 15
 Val Phe Cys Gly Arg Ile Leu Ser Met Val Asn Thr Asp Asp Val Asn
 20 25 30
 Ala Ile Ile Leu Ala Gln Lys Asn Met Leu Asp Arg Phe Glu Lys Thr
 35 40 45
 Asn Glu Met Leu Leu Asn Phe Asn Asn Leu Ser Ser Ala Arg Leu Gln
 50 55 60
 Gln Met Ser Glu Arg Phe Leu His His Thr Arg Thr Leu Val Glu Met
 65 70 75 80
 Lys Arg Asp Leu Asp Ser Ile Phe Arg Arg Ile Arg Thr Leu Lys Gly
 85 90 95
 Lys Leu Ala Arg Gln His Pro Glu Ala Phe Ser His Ile Pro Glu Ala
 100 105 110
 Ser Phe Leu Glu Glu Glu Asp Glu Asp Pro Ile Pro Pro Ser Thr Thr
 115 120 125
 Thr Thr Ile Ala Thr Ser Glu Gln Ser Thr Gly Ser Cys Asp Thr Ser
 130 135 140
 Pro Asp Thr Val Ser Pro Ser Leu Ser Pro Gly Phe Glu Asp Leu Ser
 145 150 155 160
 His Val Gln Pro Gly Ser Pro Ala Ile Asn Gly Arg Ser Gln Thr Asp
 165 170 175
 Asp Glu Glu Met Thr Gly Glu
 180

<210> 5547
 <211> 1391
 <212> DNA
 <213> Homo sapiens

<400> 5547
 nntgtcctac ggcggacagt ttcgtaccgg cttcttctct ggggtagggg tagcctcgcc
 60
 cggaagcaag gcctctggaa aaccgcggcc cctgagttgc aaacaaatgt cagatcccag
 120
 atattaaggc taagacatac tgcatttgta ataccaaaga aaaacggtcc tacctcaaaa
 180
 cgtgaaactt acacagagga ttttattaaa aagcagattg aagagttcaa cataggaaaag
 240
 agacatttag ccaacatgat gggagaagat ccagaaactt tcaactcaaga agatattgac
 300
 agagctattg cttacctttt cccaagtggg ttgtttgaga aacgagccag gccagtaatg
 360
 aagcatcctg aacagatttt tccaagacaa agagcaatcc agtggggaga agatggccgt
 420
 ccatttcact atctcttcta tactggcaaa cagtcatact attcattaat gcatgatgta
 480
 nntatggaat gttactcaat ttagaaanaa catcaaagtc acttgcaagc caaaagtctg
 540

cttccagaaa aaactgtaac cagagacgtg attggcagca gatggctgat taaggaggaa
 600
 ctagaagaaa tgtagtgga aaaactgtca gatctagatt atatgcagtt cattcggctg
 660
 ctagaaaagt tattgacatc gcagtgtggt gctgctgagg aagaatttgt gcagagggtt
 720
 cgaagaagtg taactcttga atcaaaaaaa cagctgattg aacctgtaca gtatgatgag
 780
 caaggaatgg ccttttagcaa aagcgaaggt aaaagaaaga ctgcaaaagc agaagcaatt
 840
 gtttataaac atggaagtgg aagaataaaa gtaaattgaa ttgattacca gctttacttc
 900
 ccgatacacac aggacagaga acagctgatg ttccctttcc actttgttga cgggctggga
 960
 aagcacgacg tgacctgcac agtctcaggg ggccggagggt cagcgcaggc tggagcaata
 1020
 cgactggcaa tggcaaaagc cttgtgcagc ttgtgcaccg aggacgaggt cgagtggatg
 1080
 agacaagctg gactacttac tactgatcca cgtgtgaggg aacggaagaa gccaggccaa
 1140
 gagggaagccc gcagaaagtt tacgtggaag aaacgctaag ggtttgctcc caggaaagga
 1200
 gaggaagagc tatatatatg tgccgacatg tggcagacac acagtaaata atggctgacc
 1260
 agcatgaggg cagtactgtc agaaatttct ttgagctgtg agatggattt atttttaaat
 1320
 gctactttgt aaaggtgacc tttaaaaaat aaaaggaaaa taaagaatgt tagtttcaaa
 1380
 aaaaaaaaaa a
 1391

<210> 5548

<211> 167

<212> PRT

<213> Homo sapiens

<400> 5548

Xaa	Val	Leu	Arg	Arg	Thr	Val	Ser	Tyr	Arg	Leu	Leu	Leu	Trp	Gly	Arg
1				5					10					15	
Gly	Ser	Leu	Ala	Arg	Lys	Gln	Gly	Leu	Trp	Lys	Thr	Ala	Ala	Pro	Glu
		20						25					30		
Leu	Gln	Thr	Asn	Val	Arg	Ser	Gln	Ile	Leu	Arg	Leu	Arg	His	Thr	Ala
		35					40					45			
Phe	Val	Ile	Pro	Lys	Lys	Asn	Val	Pro	Thr	Ser	Lys	Arg	Glu	Thr	Tyr
	50					55					60				
Thr	Glu	Asp	Phe	Ile	Lys	Lys	Gln	Ile	Glu	Glu	Phe	Asn	Ile	Gly	Lys
65					70					75				80	
Arg	His	Leu	Ala	Asn	Met	Met	Gly	Glu	Asp	Pro	Glu	Thr	Phe	Thr	Gln
				85				90					95		
Glu	Asp	Ile	Asp	Arg	Ala	Ile	Ala	Tyr	Leu	Phe	Pro	Ser	Gly	Leu	Phe
		100					105					110			
Glu	Lys	Arg	Ala	Arg	Pro	Val	Met	Lys	His	Pro	Glu	Gln	Ile	Phe	Pro
	115						120					125			
Arg	Gln	Arg	Ala	Ile	Gln	Trp	Gly	Glu	Asp	Gly	Arg	Pro	Phe	His	Tyr

130	135	140	
Leu Phe Tyr Thr Gly Lys Gln Ser Tyr Tyr Ser	Leu Met His Asp Val		
145	150	155	160
Xaa Met Glu Cys Tyr Ser Ile			
	165		

<210> 5549
 <211> 1865
 <212> DNA
 <213> Homo sapiens

<400> 5549
 gcgtcaccga gggccgcgca gactgcgacg gatacagggga gggcaagggt ttccttttgg
 60
 cgcttccctt tggaccccg agtgaaaaac tctaactgcc agatcagtgg agagaaacgc
 120
 agatttagga ccctgaggag tctttttcac ccgtttcccg tcaactcgctc aggcgcgcgc
 180
 agggcagtc ttgtgggggc ctggtggcca gccaaagtgg ttgccccgc agtgaagggt
 240
 gcccgaggat ggtcgggcct ggcgttgggc gtgcggcggg ctgtcttgca gcttccaggg
 300
 ctaactcagg tgagatggag ccgctatagt cctgaattca aggatccctt gattgacaag
 360
 gaatattatc gcaagccagt ggaggagcta actgaggagg agaaatatgt tcgggagctc
 420
 aagaagactc agctcatcaa agctgctcca gcagggaaaa caagttctgt gtttgaagac
 480
 ccagtcatca gtaaattcac caacatgatg atgataggag gaaacaaagt actggccaga
 540
 tccctcatga ttcagactct ggaagctgtg aaaaggaagc agtttgagaa gtacccatgcc
 600
 gcttctgcag aggaacaggc aaccatcgaa cgcaaccctt acaccatctt ccacaaagca
 660
 ctgaaaaact gtgagcctat gattgggctg gtacccatcc tcaaggaggg ccgtttctac
 720
 caggctccctg taccctacc cgaccggcgt cgccgcttcc tagccatgaa gtggatgatc
 780
 actgagtgcc gggataaaaa gcaccagcgg aactgatgc cggagaagct gtcacacaag
 840
 ctgctggagg ctttccataa ccaggggccc gtgatcaaga ggaagcatga cttgcacaag
 900
 atggcagagg ccaaccgtgc cctggcccac taccgctggg ggtagagtct ccaggaggag
 960
 cccaggggcc tctgcgcgaa gaaacagtgt gagctactgc cacgctgaaa actacctgtg
 1020
 ggttaaggat gtagttcctt tgtaaggggt ggaggcctc gtaagaaaga ttagcagca
 1080
 tattcactat ccgttaatcc ttctttcttt gaggctggaa cttgctctct ctgcccctat
 1140
 ttccttgtaa agaggagca cattgacttg ggaatttcct ccaggaaact cagggtgtt
 1200
 ttctcttccc ttaggttggg gcggacctt ggacatataa aggaagcagt ttagtatca
 1260

gaaaagattt attagaaaat tctcacgctg aactggtgta gcatgtggtg cagcattcag
 1320
 tgaactggc tggaggaaat aggcttggtt ccagagttgt cttatacaa aatgtataaa
 1380
 aagcagtttc tgggtgact tgtgctctgc ctccaccctt tgacatccca aaatatccca
 1440
 ccagtggcta tgcttaccca tttacagat gggtaaactg aggcaccaag gtagtagttg
 1500
 cactaatggt tacacagtgc agtggctctt gggagttgcc cttctctgcc tggccgtggt
 1560
 gggttgtggt ggggaaagg gctcaggga ggaccacggc ataagtggga aacatctcac
 1620
 caggagatgg gaaagtctag aagggaagac actcaaagtc tggaaggga aagtcttttg
 1680
 gtgaggcaga gactccactg ccagcttag aggtgggtag aagaaaggcc agtgcgtggt
 1740
 aggaagccct gatctggagg cctagtcgga gacttcgctg tagtaatact tgtgggcagc
 1800
 tggcgtgtgc ttccagccgg ccgcccggaa ctcaatgac tccagcagca gcagctggca
 1860
 gggcc
 1865

<210> 5550

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5550

Met	Val	Ala	Pro	Ala	Val	Lys	Val	Ala	Arg	Gly	Trp	Ser	Gly	Leu	Ala
1				5					10					15	
Leu	Gly	Val	Arg	Arg	Ala	Val	Leu	Gln	Leu	Pro	Gly	Leu	Thr	Gln	Val
			20					25					30		
Arg	Trp	Ser	Arg	Tyr	Ser	Pro	Glu	Phe	Lys	Asp	Pro	Leu	Ile	Asp	Lys
		35					40					45			
Glu	Tyr	Tyr	Arg	Lys	Pro	Val	Glu	Glu	Leu	Thr	Glu	Glu	Glu	Lys	Tyr
	50					55					60				
Val	Arg	Glu	Leu	Lys	Lys	Thr	Gln	Leu	Ile	Lys	Ala	Ala	Pro	Ala	Gly
65					70					75				80	
Lys	Thr	Ser	Ser	Val	Phe	Glu	Asp	Pro	Val	Ile	Ser	Lys	Phe	Thr	Asn
			85					90						95	
Met	Met	Met	Ile	Gly	Gly	Asn	Lys	Val	Leu	Ala	Arg	Ser	Leu	Met	Ile
			100					105					110		
Gln	Thr	Leu	Glu	Ala	Val	Lys	Arg	Lys	Gln	Phe	Glu	Lys	Tyr	His	Ala
		115				120						125			
Ala	Ser	Ala	Glu	Glu	Gln	Ala	Thr	Ile	Glu	Arg	Asn	Pro	Tyr	Thr	Ile
		130				135					140				
Phe	His	Gln	Ala	Leu	Lys	Asn	Cys	Glu	Pro	Met	Ile	Gly	Leu	Val	Pro
145					150					155				160	
Ile	Leu	Lys	Gly	Gly	Arg	Phe	Tyr	Gln	Val	Pro	Val	Pro	Leu	Pro	Asp
			165					170						175	
Arg	Arg	Arg	Arg	Phe	Leu	Ala	Met	Lys	Trp	Met	Ile	Thr	Glu	Cys	Arg
			180					185					190		
Asp	Lys	Lys	His	Gln	Arg	Thr	Leu	Met	Pro	Glu	Lys	Leu	Ser	His	Lys

195	200	205
Leu Leu Glu Ala Phe His Asn Gln Gly Pro Val Ile Lys Arg Lys His		
210	215	220
Asp Leu His Lys Met Ala Glu Ala Asn Arg Ala Leu Ala His Tyr Arg		
225	230	235
Trp Trp		240

<210> 5551

<211> 1689

<212> DNA

<213> Homo sapiens

<400> 5551

```

tttttaaatta cattatztat ttttttagatc atccctctta gtccctgcatg cattgttagc
60
acaaaaagtt gaacttgatc acaacttcct ttgaagagag agtaggtaca caatgaccat
120
ctgaagagtt tctccacgga gggaccaaga attccagacg ctggtaacac tgtcagtaac
180
ctacacaact ttcaatacaa aaaaattttac caaatatcct gtttaatgta aacaaggcag
240
gaggcaaaac agagtattac agtaaacacta ttttacaggg cccagaaaat gtgattatct
300
accatgtttt aacacataaa gtgtcacaat gacatgcata tttgatttac tacataaccc
360
aaaatataat taccatatag tgtgggtttta gcacttcact gtaacgtctt ctgtcaatac
420
tgatggactt cataattaaa tggcaattgt atgttaatgc aataatttat gaaaacatta
480
ccatgaattt atgaagtaat tccataattt gtgccctgta aaattaagtg taacaatggt
540
tacactagca acagtgtaag cgagctaaga attttgggtcc ttatatatat acatatatac
600
atatatacac acacaataat gtacaattaa accaaaaagc tatgaatcca ctcacagctt
660
ccatattgca caaacagata cattacgaga aagttacata gttataaggt gagtactata
720
tggcaatagg ctaagacaaa tctgagttct atcaagtaaa gaatgcggct cataactaaa
780
aacaaatcca aagactatat tgtagaaaag ttttaaaaaa tgtgcatatt tattgatata
840
aatgtgaagc aaggctgaaa ttcactttgg aacttgctat ggcaatcaat tgttatgacg
900
gtgctttcca ctcagcatag tgcatttttag ttactgtttt tgcaagtact gagtaacaga
960
aatattcagc tgtcaacaga aggtaagaaa aactgggtgat gcagtacaat gtttcactaa
1020
caaattgaac tcaactgtgag agcttctact ggctctaggt ctgaaatagg gccttcaggt
1080
tccaaaccaa gtaaccgctt tctgactaac agaagcttgg gagtaaagtc ttgaatacgc
1140
tggattcgaa gcataaggct tccaacaacc ctgacaatta cagagaagag agatctacag
1200

```

ccaggagcga gggtcacgta aggatccaaa aggtactcgt ggatgtgtgg atgaggggaag
 1260
 agagaaagtc tagataacac tgagggttact tgtaagttaa catcatatgg ctgatcaaga
 1320
 attcttccca ttctgtcgaa cagcactttc aaaaaatgac cttcaaagaa agcagcttct
 1380
 aaattgcact tttccaatgc ttttggagac ccaggccact cccatcttaa gcagatagca
 1440
 cagtagtctc ggaactgcct atgagcgtct cggaggtaag tgtcatatcc tgtgccctca
 1500
 acatggtagg aggattttgc gtcacccggg accagacaga gaaaactatt tacaatttta
 1560
 tgaacttcag tttttccatc atttttgggg tggctcggag tagcaggagg tgaagaacta
 1620
 agccactctt ggtttggcaa agtgttttct ggtgaaatgt cagtaaataa tggatcttct
 1680
 tccagatct
 1689

<210> 5552

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5552

Met	Gly	Arg	Ile	Leu	Asp	Gln	Pro	Tyr	Asp	Val	Asn	Leu	Gln	Val	Thr
1				5					10					15	
Ser	Val	Leu	Ser	Arg	Leu	Ser	Leu	Phe	Pro	His	Pro	His	Ile	His	Glu
		20						25					30		
Tyr	Leu	Leu	Asp	Pro	Tyr	Val	Asn	Leu	Ala	Pro	Gly	Cys	Arg	Ser	Leu
	35						40					45			
Phe	Ser	Val	Ile	Val	Arg	Val	Val	Gly	Asp	Leu	Met	Leu	Arg	Ile	Gln
	50					55					60				
Arg	Ile	Gln	Asp	Phe	Thr	Pro	Lys	Leu	Leu	Leu	Val	Arg	Lys	Arg	Leu
65					70					75				80	
Leu	Gly	Leu	Glu	Pro	Glu	Gly	Pro	Ile	Ser	Asp	Leu	Glu	Pro	Val	Glu
			85						90					95	
Ala	Leu	Thr	Val	Ser	Ser	Ile	Cys								
			100												

<210> 5553

<211> 274

<212> DNA

<213> Homo sapiens

<400> 5553

ccatggatgg aggccagggt acttcaggac ctctgaagac agcaaagcag tttctggcaa
 60
 tctctgagga ggtggcattt gttccagaaa aaaggacccc ccaaccccat cccacagcct
 120
 caccagaccc taaagtcaga ataaccggcc cagctacagc ccctgcggtc gtgcttagcc
 180
 actacagagg ctgctatttc cccagccagt gtccctggca gccttggaac ccaatgaagc
 240

aggctctgac acaggaatcc ctctgcatct ttat
274

<210> 5554
<211> 90
<212> PRT
<213> Homo sapiens

<400> 5554
Met Asp Gly Gly Gln Gly Thr Ser Gly Pro Leu Lys Thr Ala Lys Gln
1 5 10 15
Phe Leu Ala Ile Ser Glu Glu Val Ala Phe Val Pro Glu Lys Arg Thr
20 25 30
Pro Gln Pro His Pro Thr Ala Ser Pro Asp Pro Lys Val Arg Ile Thr
35 40 45
Gly Pro Ala Thr Ala Pro Ala Val Val Leu Ser His Tyr Arg Gly Cys
50 55 60
Tyr Phe Pro Ser Gln Cys Pro Trp Gln Pro Trp Lys Pro Met Lys Gln
65 70 75 80
Ala Leu Thr Gln Glu Ser Leu Cys Ile Phe
85 90

<210> 5555
<211> 414
<212> DNA
<213> Homo sapiens

<400> 5555
acgcgtgtgt gcacgcaggc atgggctttc agggctttca gagcaggggc cgacggcatt
60
ctccctcggg ccagcgggtca gatgtgggggt tcaggaaaca aggccaggt ggggatgaat
120
cacagggtg tgattctaga agggacagct gtgagggggc gggacaggct aagctggagg
180
actcaccaga cttgcggggg tcaacacgct ccagatgtct cctagacctc tcacactcag
240
cacatccaaa cctgaaccca gcacctggcc ccacacctgt ccctgggcta gagacggggg
300
cctcagccca gctgttcccc ttctcccaca gcctctcagc tgcgtgtcgg gtccattctg
360
catcttgaac atctctccca gtggattccc ttctgctgtc ctggtccagg atcc
414

<210> 5556
<211> 115
<212> PRT
<213> Homo sapiens

<400> 5556
Met Gly Phe Gln Gly Phe Gln Ser Arg Gly Arg Arg His Ser Pro Ser
1 5 10 15
Gly Gln Arg Ser Asp Val Gly Phe Arg Lys Gln Gly Pro Gly Gly Asp
20 25 30
Glu Ser Gln Gly Cys Asp Ser Arg Arg Asp Ser Cys Glu Gly Pro Gly

cggcagaaca agagccaggt gtgctgcctg cgggagcagg tggagaagaa gaacggcgag
 1140
 ctgaagagcc tgcggcagag ggtcagccgc tccgacagcc aggtgcggaa gctacaggag
 1200
 aagctggatg agctgaggag agtgagcgtc ccctatccaa gtagcctgct gtcgcccagc
 1260
 cgcgagcccc ccaagatgaa cccagtgggtg gagccactgt cctggatgct gggcacctgg
 1320
 ctgtcggacc cacctggagc cgggacctac cccacactgc agcccttcca gtacctggag
 1380
 gaggttcaca tctccacgt gggccagccc atgctgaact tctcgttcaa ctccttccac
 1440
 ccgacacgc gcaagccgat gcacagagag tgtggcttca ttcgcctcaa gcccgacacc
 1500
 aacaaggtgg cttttgtcag cggccagaac acaggcgtgg tggaagtgga ggagggcgag
 1560
 gtgaacgggc aggagctgtg catcgcatcc cactccatcg ccaggatctc cttcgccaag
 1620
 gagccccacg tagagcagat caccgggaag ttcaggctga attctgaagg caaacttgag
 1680
 cagacggtct ccatggcaac cagcacacag ccaatgactc agcatcttca cgtcacctac
 1740
 aagaaggtga ccccgtaaac ctagagcttc tggagccctc gggagggcct ggctactgtg
 1800
 cctcaacggt tcggctctc aacagacagt ccctgcggca gaagtgggtg tggccgtgag
 1860
 cctctgcagg ctcaagagtg ttgtccagat gtttctgtac tggcatagaa aaaccaaata
 1920
 aaaggccttt atttttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1970

<210> 5558

<211> 360

<212> PRT

<213> Homo sapiens

<400> 5558

Met	Asp	Asp	Phe	Thr	Pro	Pro	Gly	Ser	Gly	Ala	Cys	Lys	Phe	Ile	Gly
1				5					10					15	
Ser	Leu	His	Ser	Tyr	Ser	Phe	Ser	Ser	Lys	His	Thr	Arg	Glu	Arg	Pro
		20						25					30		
Ser	Val	Pro	Arg	Glu	Pro	Ile	Asp	Arg	Lys	Arg	Leu	Lys	Lys	Asp	Val
		35					40					45			
Glu	Pro	Ser	Cys	Ser	Gly	Ser	Ser	Leu	Gly	Pro	Asp	Lys	Gly	Leu	Ala
		50				55					60				
Gln	Ser	Pro	Pro	Ser	Ser	Ser	Leu	Thr	Ala	Thr	Arg	Gln	Lys	Pro	Ser
65					70					75				80	
Gln	Ser	Pro	Ser	Ala	Pro	Pro	Ala	Asp	Val	Thr	Pro	Lys	Pro	Ala	Thr
			85					90					95		
Glu	Ala	Val	Gln	Ser	Glu	His	Ser	Asp	Ala	Ser	Pro	Met	Ser	Ile	Asn
			100					105				110			
Glu	Val	Ile	Leu	Ser	Ala	Ser	Gly	Ala	Cys	Lys	Leu	Ile	Asp	Ser	Leu
		115					120					125			
His	Ser	Tyr	Cys	Phe	Ser	Ser	Arg	Gln	Asn	Lys	Ser	Gln	Val	Cys	Cys

130	135	140
Leu Arg Glu Gln Val Glu Lys Lys Asn Gly Glu Leu Lys Ser Leu Arg		
145	150	155
Gln Arg Val Ser Arg Ser Asp Ser Gln Val Arg Lys Leu Gln Glu Lys		160
	165	170
Leu Asp Glu Leu Arg Arg Val Ser Val Pro Tyr Pro Ser Ser Leu Leu		175
	180	185
Ser Pro Ser Arg Glu Pro Pro Lys Met Asn Pro Val Val Glu Pro Leu		190
	195	200
Ser Trp Met Leu Gly Thr Trp Leu Ser Asp Pro Pro Gly Ala Gly Thr		205
	210	215
Tyr Pro Thr Leu Gln Pro Phe Gln Tyr Leu Glu Glu Val His Ile Ser		220
225	230	235
His Val Gly Gln Pro Met Leu Asn Phe Ser Phe Asn Ser Phe His Pro		240
	245	250
Asp Thr Arg Lys Pro Met His Arg Glu Cys Gly Phe Ile Arg Leu Lys		255
	260	265
Pro Asp Thr Asn Lys Val Ala Phe Val Ser Ala Gln Asn Thr Gly Val		270
	275	280
Val Glu Val Glu Glu Gly Glu Val Asn Gly Gln Glu Leu Cys Ile Ala		285
	290	295
Ser His Ser Ile Ala Arg Ile Ser Phe Ala Lys Glu Pro His Val Glu		300
305	310	315
Gln Ile Thr Arg Lys Phe Arg Leu Asn Ser Glu Gly Lys Leu Glu Gln		320
	325	330
Thr Val Ser Met Ala Thr Thr Thr Gln Pro Met Thr Gln His Leu His		335
	340	345
Val Thr Tyr Lys Lys Val Thr Pro		350
355	360	

<210> 5559

<211> 3866

<212> DNA

<213> Homo sapiens

<400> 5559

nnaattcgag gatccgggta ccatggcaca gagcgacaga gacatttatt gttattttgtt
 60
 ttttggtggc aaaaagggaa aatggcgaac gactcccttg caaaaagtct ggtggacatc
 120
 gacctctcct ccctgcggga tcctgctggg atttttgagc tgggtggaagt ggttggaat
 180
 ggcacctatg gacaagtcta taagggtcga catgttaaaa cgggtcagtt ggcagccatc
 240
 aaagttatgg atgtcactga ggatgaagag gaagaaatca aactggagat aaatatgcta
 300
 aagaaatact ctcatcacag aaacattgca acatattatg gtgctttcat caaaaagagc
 360
 cctccaggac atgatgacca actctggctt gttatggagt tctgtggggc tgggtccatt
 420
 acagaccttg tgaagaacac caaagggaa acactcaaag aagactggat cgcttacatc
 480
 tccagagaaa tcctgagggg actggcacat cttcacattc atcatgtgat tcaccgggat
 540

atcaagggcc agaatgtgtt gctgactgag aatgcagagg tgaaacttgt tgactttggt
600
gtgagtgtc agctggacag gactgtgggg cgagaaaata cgttcatagg cactccctac
660
tggatggctc ctgagggtcat cgcctgtgat gagaaccag atgccaccta tgattacaga
720
agtgatcttt ggtcttgttg cattacagcc attgagatgg cagaagggtgc tccccctctc
780
tgtgacatgc atccaatgag agcactgttt ctattccca gaaacctcc tccccggctc
840
aagtccaaga agtggtcgaa gaagttcatt gacttcattg acacatgtct catcaagact
900
tacatgcagc ggcccaccac ggagcagctt ttgaagtttc cttttataag ggatcagccc
960
acggagcggc aggtccgcat ccagcttaag gatcatatag atcgtaccag gaagaagcgg
1020
ggtgagaaaag aggagacaga atatgagtac agcggcagcg aggaggaaga tgacagccat
1080
ggagaggaag gagagccaag ttccatcatg aacgtgcctg gagagtctac tcttcgccga
1140
gatttcctga gactgcagca ggagaacaag gaacgttccg aggctcttcg gagacaacag
1200
ttactacagg agcaacagct ccgggagcag gaagaatata aaaggcaact gctggcagag
1260
agacagaagc ggattgagca gcagaaagaa cagaggcgac ggctagaaga gcaacaaagg
1320
agagagcggg aggctagaag gcagcaggaa cgtgaacagc gaaggagaga acaagaagaa
1380
aagaggcgtc tagaggagtt ggagagaagg cgcaaagaag aagaggagag gagacgggca
1440
gaagaagaaa agaggagagt tgaaagagaa caggagtata tcaggcgaca gctagaagag
1500
gagcagcggc acttggaagt ccttcagcag cagctgctcc aggagcaggc catgttactg
1560
catgaccata ggaggccgca cccgcagcac tcgcagcagc cgccaccacc gcagcaggaa
1620
aggagcaagc caagcttcca tgctcccgag cccaaagccc actacgagcc tgctgaccga
1680
gcgcgagagg ttctgtgag aacaacatct cgctcccctg ttctgtcccg tcgagattcc
1740
ccactgcagg gcagtgggca gcagaatagc caggcaggac agagaaactc caccagcagt
1800
attgagccca ggcttctgtg ggagagagtg gagaagctgg tgcccagacc tggcagtggc
1860
agctcctcag ggtccagcaa ctccagatcc cagcccgggt ctaccctgg gtctcagagt
1920
ggctccgggg aacgcttcag agtgagatca tcatccaagt ctgaaggctc tccatctcag
1980
cgcctggaaa atgcagtga aaaacctgaa gataaaaagg aagttttcag acccctcaag
2040
cctgctggcg aagtggatct gaccgcactg gccaaagagc ttcgagcagt ggaagatgta
2100
cggccacctc acaaagtaac ggactactcc tcatccagtg aggagtcggg gacgacggat
2160

gaggaggacg acgatgtgga gcaggaaggg gctgacgagt ccacctcagg accagaggac
2220
accagagcag cgtcatctct gaatttgagc aatggtgaaa cggaatctgt gaaaaccatg
2280
attgtccatg atgatgtaga aagtgagccg gccatgaccc catccaagga gggcactcta
2340
atcgtccgcc agactcagtc cgctagtagc aactccaga aacacaaatc ttcctcctcc
2400
tttacacctt ttatagaccc cagattacta cagattttct catctagcgg aacaacagtg
2460
acatctgtgg tgggattttc ctgtgatggg atgagaccag aagccataag gcaagatcct
2520
accggaaag gctcagtggt caatgtgaat cctaccaaca ctaggccaca gagtgcaccc
2580
ccggagattc gtaaatacaa gaagagggtt aactctgaga ttctgtgtgc tgccttatgg
2640
ggagtgaatt tgctagtggg tacagagagt ggcctgatgc tgctggacag aagtggccaa
2700
gggaaggtct atcctcttat caaccgaaga cgatttcaac aaatggacgt acttgagggc
2760
ttgaatgtct tggtgacaat atctggcaaa aaggataagt tacgtgtcta ctatttgtcc
2820
tggttaagaa ataaaatact tcacaatgat ccagaagttg agaagaagca gggatggaca
2880
accgtagggg atttggaagg atgtgtacat tataaagttg taaaatatga aagaatcaaa
2940
tttctggtga ttgctttgaa gagttctgtg gaagtctatg cgtgggcacc aaagccatat
3000
cacaaattta tggcctttaa gtcatttgga gaattggtac ataagccatt actggtggat
3060
ctcactgttg aggaaggcca gaggtgaaa gtgatctatg gatcctgtgc tggattccat
3120
gctgttgatg tggattcagg atcagtctat gacatttata taccaacaca tgtaagaaa
3180
aaccacact ctatgatcca gtgtagcatc aaacccatg caatcatcat cctcccaat
3240
acagatggaa tggagcttct ggtgtgctat gaagatgagg gggtttatgt aaacacatat
3300
ggaaggatca ccaaggatgt agttctacag tggggagaga tgcctacatc agtagcatat
3360
attcgatcca atcagacaat gggctgggga gagaaggcca tagagatccg atctgtggaa
3420
actggtcact tggatggtgt gttcatgcac aaaagggtc aaagactaaa attcttgtgt
3480
gaacgcaatg acaagggtgt ctttgccctc gttcgggtctg gtggcagcag tcaggtttat
3540
ttcatgacct taggcaggac ttctcttctg agctggtaga agcagtgtga tccagggatt
3600
actggcctcc agagtcttca agatcctgag aacttggaat tccttgtaac tggagctcgg
3660
agctgcaccg agggcaacca ggacagctgt gtgtgcagac ctcatgtgtt gggttctctc
3720
ccctccttcc tgttcctctt atataccagt ttatcccat tctttttttt tttcttactc
3780

caaaataaat caaggctgca atgcagctgg tgctgttcag attccaaaaa aaaaaaaaaa
 3840
 ccatggtacc cggatcctcg aattcc
 3866

<210> 5560
 <211> 1165
 <212> PRT
 <213> Homo sapiens

<400> 5560
 Met Ala Asn Asp Ser Pro Ala Lys Ser Leu Val Asp Ile Asp Leu Ser
 1 5 10 15
 Ser Leu Arg Asp Pro Ala Gly Ile Phe Glu Leu Val Glu Val Val Gly
 20 25 30
 Asn Gly Thr Tyr Gly Gln Val Tyr Lys Gly Arg His Val Lys Thr Gly
 35 40 45
 Gln Leu Ala Ala Ile Lys Val Met Asp Val Thr Glu Asp Glu Glu Glu
 50 55 60
 Glu Ile Lys Leu Glu Ile Asn Met Leu Lys Lys Tyr Ser His His Arg
 65 70 75 80
 Asn Ile Ala Thr Tyr Gly Ala Phe Ile Lys Lys Ser Pro Pro Gly
 85 90 95
 His Asp Asp Gln Leu Trp Leu Val Met Glu Phe Cys Gly Ala Gly Ser
 100 105 110
 Ile Thr Asp Leu Val Lys Asn Thr Lys Gly Asn Thr Leu Lys Glu Asp
 115 120 125
 Trp Ile Ala Tyr Ile Ser Arg Glu Ile Leu Arg Gly Leu Ala His Leu
 130 135 140
 His Ile His His Val Ile His Arg Asp Ile Lys Gly Gln Asn Val Leu
 145 150 155 160
 Leu Thr Glu Asn Ala Glu Val Lys Leu Val Asp Phe Gly Val Ser Ala
 165 170 175
 Gln Leu Asp Arg Thr Val Gly Arg Arg Asn Thr Phe Ile Gly Thr Pro
 180 185 190
 Tyr Trp Met Ala Pro Glu Val Ile Ala Cys Asp Glu Asn Pro Asp Ala
 195 200 205
 Thr Tyr Asp Tyr Arg Ser Asp Leu Trp Ser Cys Gly Ile Thr Ala Ile
 210 215 220
 Glu Met Ala Glu Gly Ala Pro Pro Leu Cys Asp Met His Pro Met Arg
 225 230 235 240
 Ala Leu Phe Leu Ile Pro Arg Asn Pro Pro Pro Arg Leu Lys Ser Lys
 245 250 255
 Lys Trp Ser Lys Lys Phe Ile Asp Phe Ile Asp Thr Cys Leu Ile Lys
 260 265 270
 Thr Tyr Met Gln Arg Pro Thr Thr Glu Gln Leu Leu Lys Phe Pro Phe
 275 280 285
 Ile Arg Asp Gln Pro Thr Glu Arg Gln Val Arg Ile Gln Leu Lys Asp
 290 295 300
 His Ile Asp Arg Thr Arg Lys Lys Arg Gly Glu Lys Glu Glu Thr Glu
 305 310 315 320
 Tyr Glu Tyr Ser Gly Ser Glu Glu Glu Asp Asp Ser His Gly Glu Glu
 325 330 335
 Gly Glu Pro Ser Ser Ile Met Asn Val Pro Gly Glu Ser Thr Leu Arg

										340					345					350				
Arg	Asp	Phe	Leu	Arg	Leu	Gln	Gln	Glu	Asn	Lys	Glu	Arg	Ser	Glu	Ala									
			355				360						365											
Leu	Arg	Arg	Gln	Gln	Leu	Leu	Gln	Glu	Gln	Gln	Leu	Arg	Glu	Gln	Glu									
			370				375						380											
Glu	Tyr	Lys	Arg	Gln	Leu	Leu	Ala	Glu	Arg	Gln	Lys	Arg	Ile	Glu	Gln									
			385	390						395						400								
Gln	Lys	Glu	Gln	Arg	Arg	Arg	Leu	Glu	Glu	Gln	Gln	Arg	Arg	Glu	Arg									
			405						410						415									
Glu	Ala	Arg	Arg	Gln	Gln	Glu	Arg	Glu	Gln	Arg	Arg	Arg	Glu	Gln	Glu									
			420						425						430									
Glu	Lys	Arg	Arg	Leu	Glu	Glu	Leu	Glu	Arg	Arg	Arg	Lys	Glu	Glu	Glu									
			435			440						445												
Glu	Arg	Arg	Arg	Ala	Glu	Glu	Glu	Lys	Arg	Arg	Val	Glu	Arg	Glu	Gln									
			450			455						460												
Glu	Tyr	Ile	Arg	Arg	Gln	Leu	Glu	Glu	Glu	Gln	Arg	His	Leu	Glu	Val									
			465			470						475			480									
Leu	Gln	Gln	Gln	Leu	Leu	Gln	Glu	Gln	Ala	Met	Leu	Leu	His	Asp	His									
			485						490						495									
Arg	Arg	Pro	His	Pro	Gln	His	Ser	Gln	Gln	Pro	Pro	Pro	Pro	Gln	Gln									
			500						505						510									
Glu	Arg	Ser	Lys	Pro	Ser	Phe	His	Ala	Pro	Glu	Pro	Lys	Ala	His	Tyr									
			515			520						525												
Glu	Pro	Ala	Asp	Arg	Ala	Arg	Glu	Val	Pro	Val	Arg	Thr	Thr	Ser	Arg									
			530			535						540												
Ser	Pro	Val	Leu	Ser	Arg	Arg	Asp	Ser	Pro	Leu	Gln	Gly	Ser	Gly	Gln									
			545			550						555			560									
Gln	Asn	Ser	Gln	Ala	Gly	Gln	Arg	Asn	Ser	Thr	Ser	Ser	Ile	Glu	Pro									
			565						570						575									
Arg	Leu	Leu	Trp	Glu	Arg	Val	Glu	Lys	Leu	Val	Pro	Arg	Pro	Gly	Ser									
			580						585						590									
Gly	Ser	Ser	Ser	Gly	Ser	Ser	Asn	Ser	Gly	Ser	Gln	Pro	Gly	Ser	His									
			595			600						605												
Pro	Gly	Ser	Gln	Ser	Gly	Ser	Gly	Glu	Arg	Phe	Arg	Val	Arg	Ser	Ser									
			610			615						620												
Ser	Lys	Ser	Glu	Gly	Ser	Pro	Ser	Gln	Arg	Leu	Glu	Asn	Ala	Val	Lys									
			625			630						635			640									
Lys	Pro	Glu	Asp	Lys	Lys	Glu	Val	Phe	Arg	Pro	Leu	Lys	Pro	Ala	Gly									
			645						650						655									
Glu	Val	Asp	Leu	Thr	Ala	Leu	Ala	Lys	Glu	Leu	Arg	Ala	Val	Glu	Asp									
			660						665						670									
Val	Arg	Pro	Pro	His	Lys	Val	Thr	Asp	Tyr	Ser	Ser	Ser	Ser	Glu	Glu									
			675			680						685												
Ser	Gly	Thr	Thr	Asp	Glu	Glu	Asp	Asp	Asp	Val	Glu	Gln	Glu	Gly	Ala									
			690			695						700												
Asp	Glu	Ser	Thr	Ser	Gly	Pro	Glu	Asp	Thr	Arg	Ala	Ala	Ser	Ser	Leu									
			705			710						715			720									
Asn	Leu	Ser	Asn	Gly	Glu	Thr	Glu	Ser	Val	Lys	Thr	Met	Ile	Val	His									
			725						730															

770		775		780
Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser				
785		790		795
Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys				800
	805		810	815
Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp				
	820		825	830
Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu				
	835		840	845
Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly				
	850		855	860
Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile				
865		870		875
Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val				880
	885		890	895
Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu				
	900		905	910
Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys				
	915		920	925
Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr				
	930		935	940
Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys				
945		950		955
Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe				
	965		970	975
Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val				
	980		985	990
Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser				
	995		1000	1005
Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp				
	1010		1015	1020
Ile Tyr Leu Pro Thr His Val Arg Lys Asn Pro His Ser Met Ile Gln				
1025		1030		1035
Cys Ser Ile Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly				
	1045		1050	1055
Met Glu Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr				
	1060		1065	1070
Tyr Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro				
	1075		1080	1085
Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu				
	1090		1095	1100
Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val				
1105		1110		1115
Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn				
	1125		1130	1135
Asp Lys Val Phe Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val				
	1140		1145	1150
Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu Ser Trp				
	1155		1160	1165

<210> 5561

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 5561
tctagagcag gtgcgcggct gcaccggcag ccgcgggaag ctcgggccgg cagggtttcc
60
ccgcacgctg gcgccagct cccggcgagg aggcgctgt aagtttcgct ttccattcag
120
tganaacga aagctgggag ggggtgccag agcgcggggc cagaccaagg cggggccgga
180
gcggaacttc ggtcccagct cgggtcccgagg ctgagtcagg acgtggaact cagcagcgga
240
ggctggagcg ttgcatggcg cttgagagat tccatcgtgc ctggctcaca taagcgcttc
300
ctggaagtga agtcgtgctg tcctgaacgc gggccaggca gctgcggcct ggggggtttg
360
gagtgatcac gaatgagcaa ggcgtttggg ctctgaggc aaatctgtca gtccatcctg
420
gctgagtcct cgcagtcctc ggcagatctt gaagaaaaga aggaagaaga cagcaacatg
480
aagagagagc agcccagaga gcgtcccgagg gcctgggact accctcatgg cctgggttgg
540
ttacacaaca ttggacagac ctgctgcctt aactccttga ttcaggtgtt cgtaatgaat
600
gtggacttca ccaggatatt gaagaggatc acggtgcca ggggagctga cgagcagagg
660
agaagcgctc ctttccagat gcttctgctg ctggagaaga tgcaggacag ccggcagaaa
720
gcagtgcggc ccctggagct ggctactgac ctgcagaagt gcaacgtgcc cttgtttgtc
780
caacatgatg ctgcccact gtacctcaa ctctggaacc tgattaagga ccagatcact
840
gatgtgcact tgggtggagag actgcaggcc ctgtatacga tccgggtgaa ggactccttg
900
atttgcggtg actgtgccat ggagagtagc agaaacagca gcatgctcac cctcccactt
960
tctctttttg atgtggactc aaagcccctg aagacactgg aggacgccct gcactgcttc
1020
ttccagccca gggagttatc aagcaaaagc aagtgttct gtgagaactg tgggaagaag
1080
acccgtggga aacaggtctt gaagctgacc catttgcccc agaccctgac aatccacctc
1140
atgcgattct ccatcaggaa ttcacagacg agaaagatct gccactccct gtacttcccc
1200
cagagcttgg atttcagcca gatccttcca atgaagcgag agtcttgtga tgetgaggag
1260
cagtctggag ggcagtatga gctttttgct gtgattgcgc acgtgggaat ggcagactcc
1320
ggtcattact gtgtctacat ccggaatgct gtggatggaa aatggttctg cttcaatgac
1380
tccaatattt gcttgggtgc ctgggaagac atccagtgtg cctacggaaa tctaactac
1440
cactggcagg aaactgcata tcttctgggt tacatgaaga tggagtgtta atggaaatgc
1500
ccaaaacctt cagagattga cacgctgtca ttttccattt ccgttcctgg atctacggag
1560

tcttctaaga gattttgcaa tgaggagaag cattgttttc aaactatata actgagcctt
 1620
 atttataatt agggatatta tcaaaatatg taaccatgag gcccctcagg tcctgatcag
 1680
 tcagaatgga tgctttcacc agcagacccg gccatgtggc tgctcggtcc tgggtgctcg
 1740
 ctgctgtgcg agacattagc cctttagtta tgagcctgtg ggaacttcag ggggtcccag
 1800
 tggggagagc agtggcagtg ggaggcatct gggggccaaa ggtcagtggc aggggggtatt
 1860
 tcagtattat acaactgctg tgaccagact tgtatactgg ccgaatatca gtgctgtttg
 1920
 taatttttca ctttgagaac caacattaat tccatatgaa tcaagtgttt tgtaactgct
 1980
 attcatttat tcagcaaata tttattgatc atctcttctc cataagatag tgtgataaac
 2040
 acagtcatga ataaagttaa tttccacaaa aaaaaaaaaa aaaaaaaaaa
 2089

<210> 5562

<211> 372

<212> PRT

<213> Homo sapiens

<400> 5562

Met	Ser	Lys	Ala	Phe	Gly	Leu	Leu	Arg	Gln	Ile	Cys	Gln	Ser	Ile	Leu
1				5					10					15	
Ala	Glu	Ser	Ser	Gln	Ser	Pro	Ala	Asp	Leu	Glu	Glu	Lys	Lys	Glu	Glu
			20					25					30		
Asp	Ser	Asn	Met	Lys	Arg	Glu	Gln	Pro	Arg	Glu	Arg	Pro	Arg	Ala	Trp
		35					40					45			
Asp	Tyr	Pro	His	Gly	Leu	Val	Gly	Leu	His	Asn	Ile	Gly	Gln	Thr	Cys
	50				55					60					
Cys	Leu	Asn	Ser	Leu	Ile	Gln	Val	Phe	Val	Met	Asn	Val	Asp	Phe	Thr
65				70					75					80	
Arg	Ile	Leu	Lys	Arg	Ile	Thr	Val	Pro	Arg	Gly	Ala	Asp	Glu	Gln	Arg
			85					90						95	
Arg	Ser	Val	Pro	Phe	Gln	Met	Leu	Leu	Leu	Leu	Glu	Lys	Met	Gln	Asp
			100					105					110		
Ser	Arg	Gln	Lys	Ala	Val	Arg	Pro	Leu	Glu	Leu	Ala	Tyr	Cys	Leu	Gln
		115					120					125			
Lys	Cys	Asn	Val	Pro	Leu	Phe	Val	Gln	His	Asp	Ala	Ala	Gln	Leu	Tyr
	130				135					140					
Leu	Lys	Leu	Trp	Asn	Leu	Ile	Lys	Asp	Gln	Ile	Thr	Asp	Val	His	Leu
145				150					155					160	
Val	Glu	Arg	Leu	Gln	Ala	Leu	Tyr	Thr	Ile	Arg	Val	Lys	Asp	Ser	Leu
			165					170						175	
Ile	Cys	Val	Asp	Cys	Ala	Met	Glu	Ser	Ser	Arg	Asn	Ser	Ser	Met	Leu
		180					185						190		
Thr	Leu	Pro	Leu	Ser	Leu	Phe	Asp	Val	Asp	Ser	Lys	Pro	Leu	Lys	Thr
		195				200						205			
Leu	Glu	Asp	Ala	Leu	His	Cys	Phe	Phe	Gln	Pro	Arg	Glu	Leu	Ser	Ser
	210				215						220				
Lys	Ser	Lys	Cys	Phe	Cys	Glu	Asn	Cys	Gly	Lys	Lys	Thr	Arg	Gly	Lys

```

<400> 5563
nagtcaggca gcgggagccg ccgggagcgg atggcgggcgg ccgtagcggc tccactcgcc
60
gccgggggtg aggaggcggc agccacgacc tccgtgcccg ggtctccagg tctgcccggg
120
agacgcagtg cagagcgggc cctagaggag gccgtggcca ccgggaccct gaacctgtct
180
aaccggcgct tgaagcactt ccccgggggc gcggcccgta gctacgacct gtcagacatc
240
acccaggctg acctgtcccg gaaccggttt cccgaggtgc ccgaggcggc gtgccagctg
300
gtgtccctgg agggcctgag cctctaccac aattgcctga gatgcctgaa cccagccttg
360
gggaatctca cagccctcac ctacctcaac ctcagccgaa accagctgtc gctgctgcca
420
ccctacatct gccagctgcc cctgagggtc ctcatcgtca gcaacaacaa gctgggagcc
480
ctgccccctg acatcggcac cctgggaagc ctgcgacagc ttgacgtgag cagcaacgag
540
ctccaatccc tgccctcgga actgtgtggc ctctcttccc tgcgggacct caatgtccgg
600
aggaaccagc tcagtacgct gccgaagag ctggggggacc tccctctggt ccgcctggat
660
ttctcctgta accgcgtctc ccgaatccca gtctccttct gccgcctgag gcacctgcag
720
gtcattctgc tggacagcaa ccctctgcag agtccacctg cccaggtctg cctgaagggg
780
aaacttcaca tcttcaagta tttgtccaca gaggccgggc agcgtgggtc ggccctgggg
840

```


gacctggccc cttctcggcc cccgagtttc agtccctgcc ctgcagagga tctatttccg
900
ggacatcggg acgatgggtg gctggactca ggcttccaca gcgttgatag tggcagcaag
960
agggtggtctg gaaatgagtc aacagatgaa ttttcagagc tgtcattccg gatctcagag
1020
ctggcccggg agccccgggg gccagagaa cgcaaggagg atggctcagc ggacggagac
1080
cctgtgcaga ttgacttcat cgacagccat gtccccgggg aggatgaaga gcgaggcact
1140
gtggaggagc agcgaccacc cgaattaagc cctggggcag gggacagga gagggcacca
1200
agcagcaggc gggaggagcc ggcaggggag gagcggcggc gcccgacac cttgcagctg
1260
tggcaggagc gggaacggcg gcagcagcag cagagcgggg cgtggggggc cccgaggaag
1320
gatagcctct tgaagccagg gctcagggct gttgtgggag gggccgccc cgtgtccact
1380
caagccatgc acaacggctc gcctaagtc agtgcctccc aagcaggggg ctgcagcggg
1440
gcaggagacc ccgccccctg ccctgcctcc caagagcccc tccccatagc tggaccagcg
1500
acagcacctg ctccacggcc acttggtcc attcagagac caaacagctt cctcttccgt
1560
tcctcctctc agagtggctc aggcccttcc tcaccagact ctgtcctgag acctcggcgg
1620
tacccccagg ttccagatga gaaggactta atgactcage tgcgccaggc ccttgagtcc
1680
cggctgcage ggcccctgcc tgaggacctg gccgaggctc tggccagtgg ggtcatcctg
1740
tgccagctgg ccaaccagct acggccgccc tccgtgccct tcatccatgt gccctcccc
1800
gctgtgccaa aactcagtgc cctcaaggct cggaagaatg tggagagttt tctagaagcc
1860
tgtcgaaaaa tgggggtgcc tgaggctgac ctgtgctcgc cctcggatct cctccagggc
1920
actgcccggg ggctgcggac cgcgctggag gccgtgaagc ggggtggggg caaggcccta
1980
ccgccccctc ggccccctc tgggtctggg ggttcgtcg tcttctacgt ggtcctcatg
2040
ctgtgtctct atgtcaccta cactcggtc ctgggttctt agggcccaaa atcggccctc
2100
cctcacccct ttccttctct ctctatttat aaggtccctg ctccaccga cccacctgc
2160
ggtgccttca gcccaccca aagacactag tgcacccct tcacagacac tgacctcaga
2220
ggccccactc tgggtgcccc agaccctggg cccccagcct ctggcctccc tccagtagcc
2280
ccacgagtc ccacctctca gtgtgacgg tgccttcctg tccccgcgg ccctgcccc
2340
gccctctgta ccccgtaggg ggtggcagga gctggagtct ccccttctt cctgtgccct
2400
ccccttcccc ccccaacagc tgctatgggg gggctaaatt atctctattt tgtagagagg
2460

atctatattt gtaggggttc gggggccagg ccgggtccct atctctgtgt ataaactgta
 2520
 cagaccgtgg ccgccctgcc tgtgtgtgtg tgtgtgcgcg cgcgcgcgcg tctgctccgt
 2580
 gtgttggtgg ctgtggccat ggctctgtgc ccaccagcat ctccctcctg agatgccggc
 2640
 ctctcatgct cccggagcgt ccgccaaccc cccgtgtcac ctcccttctg ttatcgtga
 2700
 cagctttctt gcgtctcatt tgctgccgag ccccgagcgc acggtgatgc tcgggtctgc
 2760
 ccccgacccc ctgccacagg ccggaagccg cagggggcac cgtggggaag ctaaccgggc
 2820
 cccttcccc aggagtcact gtgccagccc caccacatcc tggaagagga ggaggcct
 2878

<210> 5564

<211> 683

<212> PRT

<213> Homo sapiens

<400> 5564

Met	Ala	Ala	Ala	Val	Ala	Ala	Pro	Leu	Ala	Ala	Gly	Gly	Glu	Glu	Ala
1				5					10					15	
Ala	Ala	Thr	Thr	Ser	Val	Pro	Gly	Ser	Pro	Gly	Leu	Pro	Gly	Arg	Arg
			20					25					30		
Ser	Ala	Glu	Arg	Ala	Leu	Glu	Glu	Ala	Val	Ala	Thr	Gly	Thr	Leu	Asn
		35					40					45			
Leu	Ser	Asn	Arg	Arg	Leu	Lys	His	Phe	Pro	Arg	Gly	Ala	Ala	Arg	Ser
	50					55					60				
Tyr	Asp	Leu	Ser	Asp	Ile	Thr	Gln	Ala	Asp	Leu	Ser	Arg	Asn	Arg	Phe
65					70					75				80	
Pro	Glu	Val	Pro	Glu	Ala	Ala	Cys	Gln	Leu	Val	Ser	Leu	Glu	Gly	Leu
				85					90				95		
Ser	Leu	Tyr	His	Asn	Cys	Leu	Arg	Cys	Leu	Asn	Pro	Ala	Leu	Gly	Asn
			100					105					110		
Leu	Thr	Ala	Leu	Thr	Tyr	Leu	Asn	Leu	Ser	Arg	Asn	Gln	Leu	Ser	Leu
		115					120					125			
Leu	Pro	Pro	Tyr	Ile	Cys	Gln	Leu	Pro	Leu	Arg	Val	Leu	Ile	Val	Ser
	130					135					140				
Asn	Asn	Lys	Leu	Gly	Ala	Leu	Pro	Pro	Asp	Ile	Gly	Thr	Leu	Gly	Ser
145					150					155				160	
Leu	Arg	Gln	Leu	Asp	Val	Ser	Ser	Asn	Glu	Leu	Gln	Ser	Leu	Pro	Ser
				165					170				175		
Glu	Leu	Cys	Gly	Leu	Ser	Ser	Leu	Arg	Asp	Leu	Asn	Val	Arg	Arg	Asn
		180						185					190		
Gln	Leu	Ser	Thr	Leu	Pro	Glu	Glu	Leu	Gly	Asp	Leu	Pro	Leu	Val	Arg
	195						200					205			
Leu	Asp	Phe	Ser	Cys	Asn	Arg	Val	Ser	Arg	Ile	Pro	Val	Ser	Phe	Cys
	210					215					220				
Arg	Leu	Arg	His	Leu	Gln	Val	Ile	Leu	Leu	Asp	Ser	Asn	Pro	Leu	Gln
225					230					235				240	
Ser	Pro	Pro	Ala	Gln	Val	Cys	Leu	Lys	Gly	Lys	Leu	His	Ile	Phe	Lys
				245					250				255		
Tyr	Leu	Ser	Thr	Glu	Ala	Gly	Gln	Arg	Gly	Ser	Ala	Leu	Gly	Asp	Leu

	260		265		270
Ala	Pro	Ser	Arg	Pro	Pro
	275		280		285
Phe	Pro	Gly	His	Arg	Tyr
	290		295		300
Val	Asp	Ser	Gly	Ser	Lys
	305		310		315
Phe	Ser	Glu	Leu	Ser	Phe
	325		330		335
Gly	Pro	Arg	Glu	Arg	Lys
	340		345		350
Gln	Ile	Asp	Phe	Ile	Asp
	355		360		365
Gly	Thr	Val	Glu	Gln	Arg
	370		375		380
Asp	Arg	Glu	Arg	Ala	Pro
	385		390		395
Glu	Arg	Arg	Arg	Pro	Asp
	405		410		415
Arg	Gln	Gln	Gln	Gln	Ser
	420		425		430
Leu	Leu	Lys	Pro	Gly	Leu
	435		440		445
Ser	Thr	Gln	Ala	Met	His
	450		455		460
Ala	Gly	Gly	Cys	Ser	Gly
	465		470		475
Gln	Glu	Pro	Leu	Pro	Ile
	485		490		495
Pro	Leu	Gly	Ser	Ile	Gln
	500		505		510
Ser	Gln	Ser	Gly	Ser	Gly
	515		520		525
Arg	Arg	Tyr	Pro	Gln	Val
	530		535		540
Arg	Gln	Val	Leu	Glu	Ser
	545		550		555
Ala	Glu	Ala	Leu	Ala	Ser
	565		570		575
Leu	Arg	Pro	Arg	Ser	Val
	580		585		590
Pro	Lys	Leu	Ser	Ala	Leu
	595		600		605
Glu	Ala	Cys	Arg	Lys	Met
	610		615		620
Ser	Asp	Leu	Leu	Gln	Gly
	625		630		635
Ala	Val	Lys	Arg	Val	Gly
	645		650		655
Ser	Gly	Leu	Gly	Phe	Val
	660		665		670
Leu	Tyr	Val	Thr	Tyr	Thr
	675		680		

<210> 5565
 <211> 472
 <212> DNA
 <213> Homo sapiens

<400> 5565
 nggatccaaa cgccgtggcc gcggggccgc gcccgggcag acccgggctc cgctctcacg
 60
 tcacgcggta catgggtac agttccttgt ccgagggctt ccgggagctg gagccgcaca
 120
 gaatgaaggg gctcactggt agtggttccc aacttcgttg catattaaac cccccggaga
 180
 acttaaactc cagtgccag tcctatgcaa tcagatcctg ggtctccact gtgcagcgcc
 240
 cgtggagagc cagcgatgtg gagggtcgag atcacccagt tctttgggga cagggtctca
 300
 ctgcccccaa ggctggagtc cggtggtgca atcacggctc acagcagtct cgacctccag
 360
 ggctcaagcg atcctccagc ctcagcctcc cgagcagctg ggagcacagg cgcataccac
 420
 gcgtggcttt tttgagaaga gggcttgcca tgtttccag gctggtctcg aa
 472

<210> 5566
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 5566
 Met Gln Ser Asp Pro Gly Ser Pro Leu Cys Ser Ala Arg Gly Glu Pro
 1 5 10 15
 Ala Met Trp Arg Val Glu Ile Thr Gln Phe Phe Gly Asp Arg Val Ser
 20 25 30
 Leu Pro Pro Arg Leu Glu Ser Gly Gly Ala Ile Thr Ala His Ser Ser
 35 40 45
 Leu Asp Leu Gln Gly Ser Ser Asp Pro Pro Ala Ser Ala Ser Arg Ala
 50 55 60
 Ala Gly Ser Thr Gly Ala Tyr His Ala Trp Leu Phe
 65 70 75

<210> 5567
 <211> 968
 <212> DNA
 <213> Homo sapiens

<400> 5567
 tttttttttt tttttttttt taggttccaa taaaatttta tttatgaaca ctaaaatttg
 60
 aatttcatat gcttttctca tgccacaaaa tattattctt ttgattgtat tcaacctttt
 120
 taaaaaacat ttttagctca caagctgtac aaaaacagac ggtgagtaaa ttggcccaca
 180
 gaccggtttg ctageccctg ggcttaagag atctgtccac ttactctca acatgcagag
 240

tgtgaactgt gtgaactgca taggccacag caatcttact gcatccattc ccgctgcac
 300
 attatTTTTg atttgtattc attcagtcca ccgaagcatt cacttggcac ctctccaaat
 360
 ctgggtactg tgcaagatcc ttccttggga cactgaagga aaatcagaca cggcccttct
 420
 ctcaagttcg cagactctcc ggtatccaga tactacggct ctcatagtat cagaaaacac
 480
 agccacaagc gcaggtaagt atcagagggtg ttttacgaga tacatgtatc agattcttaa
 540
 ggctgctgta ccaaaatacc acaaactgca tggcttaaaa caacagaaat ttattccctc
 600
 acaatcctgg aggccagatg tctgaaatca agatattggt aggggttggt ccttctcgag
 660
 actctgaggg agaactctgtg acatgcctgt tttcctagct tctagtgact tctccaatt
 720
 cttagggttc tttggctcat agatgcattg ctctaattc tgctccatc tccccatggc
 780
 cttcagctct gtgtgtctat ttccccctt tttctaagag ctagtcattg aatttagggc
 840
 ccaccctact acaggttgat ctcatttcca ggtccttgat ttcattctgca aaaacttttt
 900
 ccaaataatg tcacacgtgg agattcccag tgaatgtatc tctggggggc cactattcag
 960
 cctattac
 968

<210> 5568
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 5568
 Met Gln Ser Val Asn Cys Val Asn Cys Ile Gly His Ser Asn Leu Thr
 1 5 10 15
 Ala Ser Ile Pro Ala Ala Ser Leu Phe Leu Ile Cys Ile His Ser Val
 20 25 30
 His Arg Ser Ile His Leu Ala Pro Leu Gln Ile Trp Val Leu Cys Lys
 35 40 45
 Ile Leu Pro Trp Asp Thr Glu Gly Lys Ser Asp Thr Ala Leu Leu Ser
 50 55 60
 Ser Ser Gln Thr Leu Arg Tyr Pro Asp Thr Thr Ala Leu Ile Val Ser
 65 70 75 80
 Glu Asn Thr Ala Thr Ser Ala Gly Lys Tyr Gln Arg Cys Phe Thr Arg
 85 90 95
 Tyr Met Tyr Gln Ile Leu Lys Ala Ala Val Pro Lys Tyr His Lys Leu
 100 105 110
 His Gly Leu Lys Gln Gln Lys Phe Ile Pro Ser Gln Ser Trp Arg Pro
 115 120 125
 Asp Val
 130

<210> 5569
 <211> 876

<212> DNA

<213> Homo sapiens

<400> 5569

```

nntttttttt tttttttttt ttgttaacct agagaaaaaa atttttattta aagacacatt
60
ttaagtaaaa tgaagaacat tttacttatt tttatgtcca gtacagtcaa agcagccaca
120
ttgcataacc ccggggggacc cccttcctct ttgtgatgcc ccagaacaat attgatttga
180
ttatagaaag ccaccggcag cctacatgcg caacgggtgag ttgttggtta tatacactgt
240
ggaccataca gtggaatatt acagtcaata aaagggtattt ttagagagaa aaaaaaacat
300
tggaacacgc ttatgatata atgttaggca aaatcgctgt tatgaacagc tcgtttgggg
360
cagagcaaat cctgggaagt aacgctgagg ctgttggtgc aggcggtgga gtacaacatc
420
ttcgagggtta tggagtgcc cggctcccca ctagtggta tcagccaggg caagatcgtc
480
tttgaagacg gaaacatcaa cgtcaacaag ggcatgggcc gcttcattcc gcggaaggcg
540
ttcccgagc acagttccac gtggctggaa cttcacaatc atggcagaag gcacgtctgc
600
gaggcatcct ggggctgcac tgctgacct cttctctctc ccctggccct gagtgtctgc
660
ttcatgtggc tcagcccttc cgtccttcaa gccttcatca gcttcagggc agccccgagt
720
ctgtgcccag gtacactggc taaaatgcag tgtcttccaa atagccatat ctcttttaat
780
caggagcaa ttccagcatg gaagtcccca tcatgctcct gctggcaggt acagggtgcc
840
gtttgtgacg gatgaaagca ccgacagccc acgcgt
876

```

<210> 5570

<211> 169

<212> PRT

<213> Homo sapiens

<400> 5570

```

Thr Ala Arg Leu Gly Gln Ser Lys Ser Trp Glu Val Thr Leu Arg Leu
1           5           10           15
Leu Val Gln Ala Val Glu Tyr Asn Ile Phe Glu Gly Met Glu Cys His
20           25           30
Gly Ser Pro Leu Val Val Ile Ser Gln Gly Lys Ile Val Phe Glu Asp
35           40           45
Gly Asn Ile Asn Val Asn Lys Gly Met Gly Arg Phe Ile Pro Arg Lys
50           55           60
Ala Phe Pro Glu His Ser Ser Thr Trp Leu Glu Leu His Asn His Gly
65           70           75           80
Arg Arg His Val Cys Glu Ala Ser Trp Gly Cys Thr Ala Asp Pro Leu
85           90           95
Leu Ser Pro Leu Ala Leu Ser Ala Ala Phe Met Trp Leu Ser Pro Ser

```

	100		105		110										
Val	Leu	Gln	Ala	Phe	Ile	Ser	Phe	Arg	Ala	Ala	Pro	Ser	Leu	Cys	Pro
	115		120		125										
Gly	Thr	Leu	Ala	Lys	Met	Gln	Cys	Leu	Pro	Asn	Ser	His	Ile	Ser	Phe
	130		135		140										
Asn	Gln	Gly	Ala	Ile	Pro	Ala	Trp	Lys	Ser	Pro	Ser	Cys	Ser	Cys	Trp
145			150		155										160
Gln	Val	Gln	Val	Pro	Val	Cys	Asp	Gly							
			165												

<210> 5571

<211> 405

<212> DNA

<213> Homo sapiens

<400> 5571

aaccagaaaag tggatctctt cagcctggga attatcttct ttgagatgtc ctatcacccc
60
atgggtcacgg cttcagaaaag gatctttgtt ctcaaccaac tcagagatcc cacttcgcct
120
aagtttccag aagactttga cgatggagag catgcaaagc agaaatcagt catctcctgg
180
ctgttgaacc acgatccagc aaaacggccc acagccacag aactgctcaa gaggtagctg
240
ctgccccac ccagatgga ggagtcagag ctgcatgaag tgctgcacca cacgtgacc
300
aacgtggatg ggaaggccta ccgcaccatg atggcccaga tcttctcgca gcgcctcgct
360
ggggcggggg gaggtggcta ccgctcccg cttggcgctc cgcg
405

<210> 5572

<211> 135

<212> PRT

<213> Homo sapiens

<400> 5572

Asn	Gln	Lys	Val	Asp	Leu	Phe	Ser	Leu	Gly	Ile	Ile	Phe	Phe	Glu	Met
1			5						10					15	
Ser	Tyr	His	Pro	Met	Val	Thr	Ala	Ser	Glu	Arg	Ile	Phe	Val	Leu	Asn
			20					25					30		
Gln	Leu	Arg	Asp	Pro	Thr	Ser	Pro	Lys	Phe	Pro	Glu	Asp	Phe	Asp	Asp
	35						40				45				
Gly	Glu	His	Ala	Lys	Gln	Lys	Ser	Val	Ile	Ser	Trp	Leu	Leu	Asn	His
	50				55					60					
Asp	Pro	Ala	Lys	Arg	Pro	Thr	Ala	Thr	Glu	Leu	Leu	Lys	Ser	Glu	Leu
65				70					75					80	
Leu	Pro	Pro	Pro	Gln	Met	Glu	Glu	Ser	Glu	Leu	His	Glu	Val	Leu	His
			85				90					95			
His	Thr	Leu	Thr	Asn	Val	Asp	Gly	Lys	Ala	Tyr	Arg	Thr	Met	Met	Ala
		100					105					110			
Gln	Ile	Phe	Ser	Gln	Arg	Leu	Ala	Gly	Ala	Gly	Gly	Gly	Gly	Tyr	Arg
	115					120					125				
Ser	Arg	Leu	Gly	Val	Pro	Arg									

130

135

<210> 5573

<211> 1279

<212> DNA

<213> Homo sapiens

<400> 5573

naaaaacagg tggaatccgg gctggagccg gagctccggc ggcgcgggtg gcggcacgtc
60
cctccagaca gtaccacagg cacctggagt accggcatcg gtcgctgtgg cccccgagtg
120
tccgtcagag cctaggggag cctgccctcc cgcgcctcgt cggggcccgg ccaggcacct
180
tggccgccgg cgcacggacg cgggcacgag cactagatca cggctgctgg acctcggcac
240
gttgacaaga tttctctggg gtaccgcgga ggattacttt gaatttcggt ggtcgcctgt
300
ggtctggcat atttagaact taagtctatt atttcgggca ccatgacttt gaggctttta
360
gaagactggt gcagggggat ggacatgaac cctcggaaag cgctattgat tgccggcatc
420
tcccagagct gcagtgtggc agaaatcgag gaggctctgc aggctggttt agctcccttg
480
ggggagtaca gactgcttgg aaggatgttc aggagggatg agaacaggaa agtagcctta
540
gtagggctta ctgcggagac tagtcacgcc ctgggtcccta aggagatacc gggaaaaggg
600
ggtatctgga gagtgatctt taagccccct gaccagata atacattttt aagcagatta
660
aatgaatttt tagcgggaga gggcatgaca gtgggtgagt tgagcagagc tcttggacat
720
gaaaatggct ccttagaccc agagcagggc atgatcccgg aaatgtgggc ccctatgttg
780
gcacaggcat tagaggctct tcagcctgcc ctgcaatgct tgaagtataa aaagctgaga
840
gtgttctcgg gcagggagtc tccagaacca ggagaagaag aatttggacg ctggatgttt
900
catactactc agatgataaa ggcgtggcag gtgccagatg tagagaagag aaggcgattg
960
ctagagagcc ttcgaggccc agcacttgat gttattcgtg tcctcaagat aaacaatcct
1020
ttaattactg tcgatgaatg tctgcaggct cttgaggagg tatttggggg tacagataat
1080
cctagggagt tgcaggtcaa atatctaacc acttaccaga aggatgagga aaagttgtcg
1140
gcttatgtac taaggctgga gcctttgtta cagaagctgg tacagagagg agcaattgag
1200
agagatgctg tgaatcaggc ccgcctagac caagtcattg ctggggcagt ccacaaaaca
1260
attcgcagag agcttaata
1279

<210> 5574

<211> 312
 <212> PRT
 <213> Homo sapiens

<400> 5574

```

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn
 1           5           10           15
Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val
      20           25           30
Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu
      35           40           45
Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val
      50           55           60
Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys
      65           70           75           80
Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro
      85           90           95
Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly
      100          105          110
Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn
      115          120          125
Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro
      130          135          140
Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu
      145          150          155          160
Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro
      165          170          175
Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile
      180          185          190
Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu
      195          200          205
Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn
      210          215          220
Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val
      225          230          235          240
Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr
      245          250          255
Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu
      260          265          270
Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp
      275          280          285
Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His
      290          295          300
Lys Thr Ile Arg Arg Glu Leu Asn
305          310

```

<210> 5575
 <211> 2405
 <212> DNA
 <213> Homo sapiens

<400> 5575

ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
 60

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcatgta ttcagactct
120
ttagcatata cagtagagtt tctaattgttgc tcagcattcc ctagtgggag gttacaagtt
180
agggtgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg
240
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga
300
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcattc
360
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgtaaacgg caatgagggg
420
cgcgtgtctg tggaaaacat caagcagctg ttgcaatgtt tagtcccagg aagcaccact
480
ctgcacagtg ctgagatttt ggctgaaatc gcccggtacc ttcggcctgg tggatgtctt
540
tttctgaagg agccagtaga gacagctgta gataacaata gcaaagtga gacagcatct
600
aagctgtgtt cagccctgac tctttctggt cttgtggaag tgaaagagct gcagcgggag
660
cccctaacc ctgaggaagt acagtctgtt cgagaacacc ttggtcatga aagtgaac
720
ctgctgtttg ttcagatcac aggcaaaaaa ccaaactttg aagtgggttc ttctaggcag
780
cttaagcttt ccatcaccaa gaagtcttct ccttcagtga aacctgctgt ggaccctgct
840
gctgccaaagc tgtggaccct ctccagcaac gatatggagg acgacagcat gtgcatcttc
900
tgtggatgta gtttaactca ccgttggcct cttgagcatg tggtcagggt gaacatgatg
960
atcaacaaaa aggaggacag ggtggacacc ttctttacc tggactcaa gtttcctctc
1020
gaagcctgca gtcactttag cttttcatta gcagagacca cgactgtatc actcattgct
1080
ttgaacactc tccaggatct cattgactca gatgagctgc tggatccaga agatttgaag
1140
aagccagatc cagcttcctt gcgggctgct tcttgtgggg aagggaaaaa gaggaaggcc
1200
tgtaagaact gcacctgtgg ccttgctgaa gaactggaaa aagagaagtc aagggaacag
1260
atgagctccc aaccaagtc agcttgtgga aactgctacc tgggcgatgc cttccgctgt
1320
gccagctgcc cctaccttgg gatgccagcc ttcaaactg gggaaaagg gcttctgagt
1380
gatagcaatc ttcattgatc ctaggagggt cctgacatgg gacctatctg ctctccagc
1440
caactcctgt cctcacatc ccaccatggt ggctcctccc acctcctctg gatttgttca
1500
ctctgagatc tgtttgaga gtgggtgctt agcagacaga gtgaagctgg ctggggggca
1560
cagtgggtgt tagtgctgct gtgtatcaaa agaccaagg attatgggac ctggtttcag
1620
aatgggatgg gtttcttcac ctcatgttaa gagaaggag tgtgtcctga agaagccctt
1680

cttctgatgt taaaatgctg accagaacgc tcttgagccc aggcacgtt gagcattaac
 1740
 actctgtgac agagctgcag acccctgcct tgagtctcat ctcagcaatg ctgccacct
 1800
 cttgtctttc agagttgtta gtttactcca ttctttgtga cacgagtcaa gtggctcaca
 1860
 acctcctcag ggcaccagag gactcactca ctgggtgctg tgatgatata cagtgtccct
 1920
 ctgccccctt ccatcccaaa ccacatttga ctgtagcatt gcactctgtg cctgttgtca
 1980
 tttatgttaa ccttcaggta ttaaacttgc tgcatactt gacatactt gagattctgc
 2040
 atgtcttgta aagagagggg atgtgcattt gtgtgtgatg ttggatagtc atccacgctc
 2100
 agtttgacc attggaggaa cttagtgtca cgcacaaatg gggctattcc tacgcttaga
 2160
 atagggcttg tctgccact ttagaagagt ccagggttgg gagcatttag agggaagcag
 2220
 ggcagaactc tgaacgacaa tacgtctctc tgagcagaga cccctttgtt cttgttatcc
 2280
 acctatagg acttggaatc aatcttgcca aatatttga gagatttgtt ggatttaaga
 2340
 gacctggatt tttatatttt accagtaaataaaaagttttc attgatattc gtccttgaaa
 2400
 cttga
 2405

<210> 5576

<211> 367

<212> PRT

<213> Homo sapiens

<400> 5576

Met	Ala	Asp	Phe	Gly	Ile	Ser	Ala	Gly	Gln	Phe	Val	Ala	Val	Val	Trp
1				5					10					15	
Asp	Lys	Ser	Ser	Pro	Val	Glu	Ala	Leu	Lys	Gly	Leu	Val	Asp	Lys	Leu
			20					25					30		
Gln	Ala	Leu	Thr	Gly	Asn	Glu	Gly	Arg	Val	Ser	Val	Glu	Asn	Ile	Lys
		35				40						45			
Gln	Leu	Leu	Gln	Cys	Leu	Val	Pro	Gly	Ser	Thr	Thr	Leu	His	Ser	Ala
	50				55						60				
Glu	Ile	Leu	Ala	Glu	Ile	Ala	Arg	Ile	Leu	Arg	Pro	Gly	Gly	Cys	Leu
65				70				75						80	
Phe	Leu	Lys	Glu	Pro	Val	Glu	Thr	Ala	Val	Asp	Asn	Asn	Ser	Lys	Val
			85					90						95	
Lys	Thr	Ala	Ser	Lys	Leu	Cys	Ser	Ala	Leu	Thr	Leu	Ser	Gly	Leu	Val
		100						105					110		
Glu	Val	Lys	Glu	Leu	Gln	Arg	Glu	Pro	Leu	Thr	Pro	Glu	Glu	Val	Gln
		115				120						125			
Ser	Val	Arg	Glu	His	Leu	Gly	His	Glu	Ser	Asp	Asn	Leu	Leu	Phe	Val
	130					135					140				
Gln	Ile	Thr	Gly	Lys	Lys	Pro	Asn	Phe	Glu	Val	Gly	Ser	Ser	Arg	Gln
145				150					155					160	
Leu	Lys	Leu	Ser	Ile	Thr	Lys	Lys	Ser	Ser	Pro	Ser	Val	Lys	Pro	Ala

```
<210> 5577
<211> 659
<212> DNA
<213> Homo sapiens
```

4760

<210> 5578
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 5578
 Leu His Ala Asp Lys Leu Trp Phe Cys Cys Leu Ser Pro Asn His Lys
 1 5 10 15
 Leu Leu Gln Tyr Gly Asp Met Glu Glu Gly Xaa Gln Pro Ala Tyr Pro
 20 25 30
 Xaa Glu Ser Leu Pro Glu Gln Leu Pro Val Ala Asp Met Arg Ala Leu
 35 40 45
 Leu Thr Gly Lys Asp Cys Pro His Val Arg Glu Lys Gly Ser Gly Lys
 50 55 60
 Gln Asn Lys Asp Leu Tyr Glu Leu Ala Phe Ser Ile Ser Tyr Asp Arg
 65 70 75 80
 Gly Glu Glu Glu Ala Tyr Leu Asn Phe Ile Ala Pro Ser Lys Arg Glu
 85 90 95
 Phe Tyr Leu Trp Thr Asp Gly Leu Ser Ala Leu Leu Gly Ser Pro Met
 100 105 110
 Gly Ser Glu Gln Thr Arg Leu Asp Leu Glu Gln Leu Leu Thr Met Glu
 115 120 125
 Thr Lys Leu Arg Leu Leu Glu Leu Glu Asn Val Pro Ile Pro Glu Arg
 130 135 140
 Pro Pro Pro Val Pro Pro Pro Pro Thr Asn Phe Asn Phe Cys Tyr Asp
 145 150 155 160
 Cys Ser Ile Ala Glu Pro
 165

<210> 5579
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 5579
 actcctgtat caaccatgag ttcttctcag cctgtgtcac gaccattgca acccatataa
 60
 ccagcaccgc ctcttcaacc atctggggtg ccaacaagtg gaccatctca gaccaccata
 120
 cacttactac ctacagctcc aactaccgtg aatgtaaacac atcgtccagt aactcagggtg
 180
 accacaagac tccctgtacc aagagctcct gcaaaccacc aggtgggtta tacaactctt
 240
 cctgcaccac cagctcaggc tcccttgcca ggaactgtta tgcaggctcc tgctgttcgg
 300
 caggtcaatc cccaaaatag tggtacagtt cgagtgcctc aaacaaccac atatgttgta
 360
 aacaatggac taaccctggg atcaacagga cctcagctca cagtgcacat cgcaccacca
 420
 caagtgcata ctgagccccc acgccccgtg caccagcac ccttaccaga agctccacaa
 480
 ccacagcgtc tgccccaga agctgccagc acatctctgc ctcagaagcc acacttgaag
 540

ttagcacgcg ttcagagtca aaatggcata gtactgtcat ggagtgtcct ggaggtggat
 600
 cgaagctgtg ccactgttga tagctacat ctctatgctt accatgagga acccagtgcc
 660
 actgtgccct cacaatggaa aaagattggg gaagtcaagg cacttccctt gcccatggca
 720
 tgtactctca cccagtttgt atctggtagc aaatactact ttgcagtacg agccaaggat
 780
 atttatggac gttttgggcc tttctgtgat cctcagtcaa cagatgtgat ctcttctacc
 840
 cagagcagtt aaaccttgga gcctttatat tttctctttt taaaatttcc accttttggt
 900
 cttgttttta atcttgtgca tgatacccca tgtaaaatcc accttgtgca agatttcttg
 960
 gacagatgtg tgtatacact acatttgttt ataaccagaa gcaaaataaa ctcagcccac
 1020
 aaagctagaa tcttttcctg gacagtttag gctttggggt ttggaaatgt aaatgtgtac
 1080
 cttgctttag ttttgaggct ggggaatatg tgtgggtggt tatgtgtggt tttccttatg
 1140
 taggtgttat tgcattggag tctccattt tcattctcaa atttacctct taaagtacga
 1200
 agtaagtaga tcaaaggatt tgagatgtgt aactggcatg attctgcttt tgaaggatct
 1260
 atagtatcat tttagttaag tgggtcaaac agaatacaaa caaaacccaa ag
 1312

<210> 5580

<211> 283

<212> PRT

<213> Homo sapiens

<400> 5580

Thr	Pro	Val	Ser	Thr	Met	Ser	Ser	Ser	Gln	Pro	Val	Ser	Arg	Pro	Leu
1				5					10					15	
Gln	Pro	Ile	Gln	Pro	Ala	Pro	Pro	Leu	Gln	Pro	Ser	Gly	Val	Pro	Thr
		20						25					30		
Ser	Gly	Pro	Ser	Gln	Thr	Thr	Ile	His	Leu	Leu	Pro	Thr	Ala	Pro	Thr
	35					40						45			
Thr	Val	Asn	Val	Thr	His	Arg	Pro	Val	Thr	Gln	Val	Thr	Thr	Arg	Leu
	50				55					60					
Pro	Val	Pro	Arg	Ala	Pro	Ala	Asn	His	Gln	Val	Val	Tyr	Thr	Thr	Leu
65				70					75					80	
Pro	Ala	Pro	Pro	Ala	Gln	Ala	Pro	Leu	Arg	Gly	Thr	Val	Met	Gln	Ala
				85				90						95	
Pro	Ala	Val	Arg	Gln	Val	Asn	Pro	Gln	Asn	Ser	Val	Thr	Val	Arg	Val
		100					105						110		
Pro	Gln	Thr	Thr	Tyr	Val	Val	Val	Asn	Asn	Gly	Leu	Thr	Leu	Gly	Ser
	115				120						125				
Thr	Gly	Pro	Gln	Leu	Thr	Val	His	His	Arg	Pro	Pro	Gln	Val	His	Thr
	130				135						140				
Glu	Pro	Pro	Arg	Pro	Val	His	Pro	Ala	Pro	Leu	Pro	Glu	Ala	Pro	Gln
145				150						155				160	
Pro	Gln	Arg	Leu	Pro	Pro	Glu	Ala	Ala	Ser	Thr	Ser	Leu	Pro	Gln	Lys

165								170					175			
Pro	His	Leu	Lys	Leu	Ala	Arg	Val	Gln	Ser	Gln	Asn	Gly	Ile	Val	Leu	
180								185					190			
Ser	Trp	Ser	Val	Leu	Glu	Val	Asp	Arg	Ser	Cys	Ala	Thr	Val	Asp	Ser	
195								200					205			
Tyr	His	Leu	Tyr	Ala	Tyr	His	Glu	Glu	Pro	Ser	Ala	Thr	Val	Pro	Ser	
210								215					220			
Gln	Trp	Lys	Lys	Ile	Gly	Glu	Val	Lys	Ala	Leu	Pro	Leu	Pro	Met	Ala	
225								230					235			
Cys	Thr	Leu	Thr	Gln	Phe	Val	Ser	Gly	Ser	Lys	Tyr	Tyr	Phe	Ala	Val	
245								250					255			
Arg	Ala	Lys	Asp	Ile	Tyr	Gly	Arg	Phe	Gly	Pro	Phe	Cys	Asp	Pro	Gln	
260								265					270			
Ser	Thr	Asp	Val	Ile	Ser	Ser	Thr	Gln	Ser	Ser						
275								280								

```
<210> 5581
<211> 720
<212> DNA
<213> Homo sapiens
```

```

<540> 5581
accgtggaaa cgcgggccat ggcggcaccg cggcaaattc ccagccacat agtgcgcctc
60
aagcccagct gctctacaga ctcgtcgttc acccggacgc cgggtgccac cgtgtctctc
120
gcgtcccgcg agctgcctgt ctcgtcgtgg caggtcaccg agccgtcaag caagaatctg
180
tgggagcaga tctgcaagga gtatgaagct gagcagcctc cctttccaga aggatataaa
240
gtcaaacagg agcctgtgat tacggttgcg ccagtagagg aaatgctttt tcatggcttc
300
agtgcagagc actattttcc ggtttcccat ttcaccatga' tctcacgtac accctgtcct
360
caagataaat cggaaacaat caacccaaaa acatgtttctc ccaaagaata tttggaaact
420
ttcatctttc ctgttctgct tcccggaatg gctagcctgc ttcaccaagc gaagaaagaa
480
aaatgttttg aggtcagttg tttggcagga tttctttatt ttgagattct caatcattca
540
ttattatcag atgatatgctc attatcttgg taccatcagg ttgttctcca gatgaccctc
600
tcgggaggga aagcctgtgt ttggggtcac ttaccagtt ccagccacac catctagttg
660
tgcacataca tgcgctgcca tctgtctggc cacttggaact ccggagagct tttccgcctt
720

```

```
<210> 5582
<211> 212
<212> PRT
<213> Homo sapiens
```

<400> 5582
Met Ala Ala Pro Arg Gln Ile Pro Ser His Ile Val Arg Leu Lys Pro

```

      1           5           10           15
Ser Cys Ser Thr Asp Ser Ser Phe Thr Arg Thr Pro Val Pro Thr Val
      20           25           30
Ser Leu Ala Ser Arg Glu Leu Pro Val Ser Ser Trp Gln Val Thr Glu
      35           40           45
Pro Ser Ser Lys Asn Leu Trp Glu Gln Ile Cys Lys Glu Tyr Glu Ala
      50           55           60
Glu Gln Pro Pro Phe Pro Glu Gly Tyr Lys Val Lys Gln Glu Pro Val
      65           70           75           80
Ile Thr Val Ala Pro Val Glu Glu Met Leu Phe His Gly Phe Ser Ala
      85           90           95
Glu His Tyr Phe Pro Val Ser His Phe Thr Met Ile Ser Arg Thr Pro
      100          105          110
Cys Pro Gln Asp Lys Ser Glu Thr Ile Asn Pro Lys Thr Cys Ser Pro
      115          120          125
Lys Glu Tyr Leu Glu Thr Phe Ile Phe Pro Val Leu Leu Pro Gly Met
      130          135          140
Ala Ser Leu Leu His Gln Ala Lys Lys Glu Lys Cys Phe Glu Val Ser
      145          150          155          160
Cys Leu Ala Gly Phe Leu Tyr Phe Glu Ile Leu Asn His Ser Leu Leu
      165          170          175
Ser Asp Asp Ser Ser Leu Ser Trp Tyr His Gln Val Val Leu Gln Met
      180          185          190
Thr Pro Ser Gly Gly Lys Ala Cys Val Trp Gly His Leu Pro Ser Ser
      195          200          205
Ser His Thr Ile
      210

```

<210> 5583

<211> 2101

<212> DNA

<213> Homo sapiens

<400> 5583

```

nnaggccgcg actgcgtgct gctgcaagag gactttctgg cgcacagggg cgcacccac
60
gtctacctgc agcgcattcca gctcaacaac cccacggagc gcgtggccgc gctgcagact
120
gtggggccca ctgccggccc agcccccaat gccttcacca gtaccctgga gaaggctcga
180
gaccatcagt tcctcctcta ctcaggccgg tccccgccta cgcctactgg gttggtgcac
240
ctggtggtgg tggccgcca gaagctggtg aaccgcctcc aagtggctcc caagacgcag
300
ctggatgaga cgggtgctgt ggtggtgcac gtctctggcc ccattaaccc ccagggtgctc
360
aaaagcaaag cagccaagga gctcaaggcg ctgcaggact tggcacggaa ggaaatgctg
420
gagctcttgg acatgccagc ggcggagctg cttcaagacc accagctcct ctgggctcag
480
ctcttcagcc caggagtgga aatgaagaag atcactgaca cccacacgcc gtctggcctc
540
accgtgaacc tgacgtctta ttacatgctc tcctgctcgc cagccccact gctcagcccc
600

```


tccctgagcc acagggagcg agaccagatg gagtcgacgc tcaactatga agatcactgc
660
ttcagcgggc acgccaccat gcacgccgag aacctgtggc cggggcggct gtcctccgtc
720
cagcagatcc tgcagctctc tgacctgtgg aggctgaccc tccagaagcg tggctgcaag
780
gggctggtga aggtgggtgc cccaggcatc ctgcagggga tgggtgctcag ctttgggggg
840
ctgcagttca cagagaacca cctccagttc caggccgacc ccgacgtgct gcacaacagc
900
tatgcattgc atggcatccg ctacaagaac gaccatatca acctggccgt gctgcggatg
960
ccgagggcaa gccctaccta cacgtgtccg tggagtcccg tggccagcct gtcnagatc
1020
tatgcctgca aggcaggctg cctggacgag ccagtggagc tgacctcggc gccacgggc
1080
cacaccttct cggtcatggc gacacagccc atcacgccac tgctctacat ctccaccgac
1140
ctcacacacc tgcaggacct gcggcacacg ctgcacctca aggccatcct ggcccatgat
1200
gagcacatgg cccagcagga ccccgggctg cccttctctt tctggttcag cgtggcctcc
1260
ctaatacccc tcttcacct ctctctcttc aagctcatct acaacgagta ctgtgggcct
1320
ggagccaagc ccctcttcag gagtaaggaa gatcccagtg tctgagtga ctaacagtcc
1380
tgctttcagc caccatttgc acaagacacc cagcactgaa agtcccgtg ccaggagcaa
1440
gggatccttt ggaagcacc gccctttgtg ccttggtggg ggaaaccggc gacgcagaag
1500
tgagtgtgga tacaccagag tttgcattgg aaggaatgag tgtcacgtgg ggagggaagg
1560
ggccagtgga ccttttgtta gctttccact caataaaatg aacctgtatg gcaataactt
1620
gaaatggaac tcaactcttc cactttcccc ctttcttctg tcccaggaaa tagatcatct
1680
tttgaaaaga ctcttgctta ggaaaagttg tgctcttttc ctaatttaac gtgttctttc
1740
ttaatgaagt ttttaattat ttttggtgag attttgctag atggcttttg catcccctgt
1800
agatggtgag tgttggcggc gatgtccgtc tcggcggtcg gagggccac ggtcccagg
1860
ctgggccggg gccccccagg gtggctgtgc tgctgcctgt aggagggcgc gggttgtgct
1920
gtcactctcg ggtttgacg ccctttttta ggagcctgtg gacatctgtg gttttgtact
1980
ttggggcttc aggggaggtg tttaactttc tagtgattga tgattgtcag gttttgaaat
2040
accaaagctt ttttgttctg tttttaaata aatatcttc aaactttaaa aaaaaaaaaa
2100
a
2101

<210> 5584

<211> 454

<212> PRT

<213> Homo sapiens

<400> 5584

```

Xaa Gly Arg Asp Cys Val Leu Leu Gln Glu Asp Phe Leu Ala His Arg
 1           5           10           15
Gly Arg Pro His Val Tyr Leu Gln Arg Ile Gln Leu Asn Asn Pro Thr
      20           25           30
Glu Arg Val Ala Ala Leu Gln Thr Val Gly Pro Thr Ala Gly Pro Ala
      35           40           45
Pro Asn Ala Phe Thr Ser Thr Leu Glu Lys Val Gly Asp His Gln Phe
      50           55           60
Leu Leu Tyr Ser Gly Arg Ser Pro Pro Thr Pro Thr Gly Leu Val His
      65           70           75           80
Leu Val Val Val Ala Ala Lys Lys Leu Val Asn Arg Leu Gln Val Ala
      85           90           95
Pro Lys Thr Gln Leu Asp Glu Thr Val Leu Trp Val Val His Val Ser
      100          105          110
Gly Pro Ile Asn Pro Gln Val Leu Lys Ser Lys Ala Ala Lys Glu Leu
      115          120          125
Lys Ala Leu Gln Asp Leu Ala Arg Lys Glu Met Leu Glu Leu Leu Asp
      130          135          140
Met Pro Ala Ala Glu Leu Leu Gln Asp His Gln Leu Leu Trp Ala Gln
      145          150          155          160
Leu Phe Ser Pro Gly Val Glu Met Lys Lys Ile Thr Asp Thr His Thr
      165          170          175
Pro Ser Gly Leu Thr Val Asn Leu Thr Leu Tyr Tyr Met Leu Ser Cys
      180          185          190
Ser Pro Ala Pro Leu Leu Ser Pro Ser Leu Ser His Arg Glu Arg Asp
      195          200          205
Gln Met Glu Ser Thr Leu Asn Tyr Glu Asp His Cys Phe Ser Gly His
      210          215          220
Ala Thr Met His Ala Glu Asn Leu Trp Pro Gly Arg Leu Ser Ser Val
      225          230          235          240
Gln Gln Ile Leu Gln Leu Ser Asp Leu Trp Arg Leu Thr Leu Gln Lys
      245          250          255
Arg Gly Cys Lys Gly Leu Val Lys Val Gly Ala Pro Gly Ile Leu Gln
      260          265          270
Gly Met Val Leu Ser Phe Gly Gly Leu Gln Phe Thr Glu Asn His Leu
      275          280          285
Gln Phe Gln Ala Asp Pro Asp Val Leu His Asn Ser Tyr Ala Leu His
      290          295          300
Gly Ile Arg Tyr Lys Asn Asp His Ile Asn Leu Ala Val Leu Arg Met
      305          310          315          320
Pro Arg Ala Ser Pro Thr Tyr Thr Cys Pro Trp Ser Pro Val Ala Ser
      325          330          335
Leu Ser Xaa Ile Tyr Ala Cys Lys Ala Gly Cys Leu Asp Glu Pro Val
      340          345          350
Glu Leu Thr Ser Ala Pro Thr Gly His Thr Phe Ser Val Met Val Thr
      355          360          365
Gln Pro Ile Thr Pro Leu Leu Tyr Ile Ser Thr Asp Leu Thr His Leu
      370          375          380
Gln Asp Leu Arg His Thr Leu His Leu Lys Ala Ile Leu Ala His Asp

```

```

385          390          395          400
Glu His Met Ala Gln Asp Pro Gly Leu Pro Phe Leu Phe Trp Phe
          405          410          415
Ser Val Ala Ser Leu Ile Thr Leu Phe His Leu Phe Leu Phe Lys Leu
          420          425          430
Ile Tyr Asn Glu Tyr Cys Gly Pro Gly Ala Lys Pro Leu Phe Arg Ser
          435          440          445
Lys Glu Asp Pro Ser Val
          450

```

```

<210> 5585
<211> 740
<212> DNA
<213> Homo sapiens

```

```

<400> 5585
tttttttttt gctttttttt ttttttttta ctttgaacat tagcattaag ttggttacg
60
tacacatcca aaggcccagc atctcagaaa aatcattagg cggcacacct gtaccagagt
120
ctcacaagaa taaaatatac aatgctacat tgagtgggta aaaatacaca aaaaagtagt
180
tttaacaatc tataaatttt ttatacttaa aatcatgatt gagttgaaat aaaaaagtgc
240
atttcaattg ctaaaaaaat aatatcggtg tagttaacac aagggggaaa tcagtacatt
300
gagggatctg acaggatgct ggaaaaaatg actcagggaa gccgggcagc atgggctcct
360
ttggagattc aggagcggag ctcaagttcca cctcactgca gttccctggg gccaaagcagc
420
cctcctctcc ccagtatctt tcccatctta agagatcctg tctacctac ctgtcacctc
480
cccaacccaa agactcctct aaacttcttt gcagcatgac agctgcctgc cctacactga
540
gtctacttga ccttcaattg cgtctccgca gagaggtagg agagggacac tgccccattc
600
tggaacttgac ataagtaccc cagccacatg gccttcatcc ttatgaccta gcaggcagaa
660
cagggaccaa gcagcttcta ttttgtcaaa ctcttttgga caaatattca acattcaaca
720
acaagctttg taaacctaac
740

```

```

<210> 5586
<211> 87
<212> PRT
<213> Homo sapiens

```

```

<400> 5586
Met Gly Ser Phe Gly Asp Ser Gly Ala Glu Leu Ser Ser Thr Ser Leu
1          5          10          15
Gln Phe Pro Gly Ala Lys Gln Pro Ser Ser Pro Gln Tyr Leu Ser His
          20          25          30
Leu Lys Arg Ser Cys Pro Thr Tyr Leu Ser Pro Pro Gln Pro Lys Asp

```

```

<400> 5588
Met Ala Pro Glu His Glu Ile Pro Lys Ile Gly Trp Tyr Ser Arg Phe
  1                      5                      10                      15
Ala Arg His Pro Phe Tyr Gly Ser Ala Gly Val Asn Ser Gly Val Met

```

										20							25							30		
Leu	Met	Asn	Leu	Thr	Arg	Ile	Arg	Ser	Thr	Gln	Phe	Lys	Asn	Ser	Met											
		35						40						45												
Ile	Pro	Thr	Gly	Leu	Ala	Trp	Glu	Asp	Met	Leu	Tyr	Pro	Leu	Tyr	Gln											
		50				55				60																
Lys	Tyr	Lys	Asn	Ala	Ile	Thr	Trp	Gly	Asp	Gln	Asp	Leu	Leu	Asn	Ile											
65					70				75				80													
Ile	Phe	Tyr	Phe	Asn	Pro	Glu	Cys	Leu	Tyr	Val	Phe	Pro	Cys	Gln	Trp											
		85						90				95														
Asn	Tyr	Arg	Pro	Asp	His	Cys	Met	Tyr	Gly	Ser	Asn	Cys	Arg	Glu	Ala											
		100						105				110														
Glu	His	Glu	Gly	Val	Ser	Val	Leu	His	Gly	Asn	Arg	Gly	Val	Tyr	His											
		115				120				125																
Asp	Asp	Lys	Gln	Pro	Thr	Phe	Arg	Ala	Leu	Tyr	Glu	Ala	Ile	Arg	Asp											
		130				135				140																
Phe	Pro	Phe	Gln	Asp	Asn	Leu	Phe	Gln	Ser	Met	Tyr	Tyr	Pro	Leu	Gln											
145					150				155				160													
Leu	Lys	Phe	Leu	Glu	Thr	Val	His	Thr	Leu	Cys	Gly	Arg	Ile	Pro	Gln											
		165						170				175														
Val	Phe	Leu	Lys	Gln	Ile	Glu	Lys	Thr	Met	Lys	Arg	Ala	Tyr	Glu	Lys											
		180				185				190																
His	Val	Ile	Ile	His	Val	Gly	Pro	Asn	Gln	Met	His															
		195				200																				

<210> 5589

<211> 1327

<212> DNA

<213> Homo sapiens

<400> 5589

```

nncccccttc cccctccac agctgcctcc atttcttaa ggaagggttt ttttctctt
60
ccctcccca caccgtagcg gcgcgcgagc gggccgggcg ggcggccgag ttttccaaga
120
gataacttca ccaagatgtc cagtgatagg caaagggtccg atgatgagag cccagcacc
180
agcagtggca gttcagatgc ggaccagcga gaccagccg ctccagagcc tgaagaacaa
240
gaggaaagaa aaccttctgc caccagcag aagaaaaaca ccaaactctc tagcaaaacc
300
actgctaagt tatccactag tgctaaaaga attcagaagg agctagctga aataaccctt
360
gatcctctc ctaattgcag tgctgggcct aaaggagata acatttatga atggagatca
420
actatacttg gtccaccggg ttctgtatat gaaggtggtg tgttttttct ggatatcaca
480
ttttcatcag attatccatt taagccacca aagggtactt tccgcaccag aatctatcac
540
tgcaacatca acagtcaggg agtcatctgt ctggacatcc ttaaagacaa ctggagtccc
600
gctttgacta tttcaaagg tttgctgtct atttgttccc ttttgacaga ctgcaaccct
660
gcggtacctc tggttggaag catagccact cagtatttga ccaacagagc agaacacgac
720

```

aggatagcca gacagtggac caagagatac gcaacataat tcacataatt tgtatgcagt
 780
 gtgaaggagc agaaggcatc ttctcactgt gctgcaaate tttatagcct ttacaatacg
 840
 gacttctgtg tatatgttat actgattcta ctctgctttt atcctttgga gcctgggaga
 900
 ctccccaaaa aggtaaatgc tatcaagagt agaactttgt agctgtagat tagttatgtt
 960
 taaaacgcct acttgcaagt cttgcttctt tgggatatca aaatgtattt tgtgatgtac
 1020
 taaggatact ggtcctgaag tctaccaaatt attatagtgc attttagcct aattcattat
 1080
 ctgtatgaag ttataaaaagt agctgtagat ggctaggaat tatgtcattt gtattaaacc
 1140
 cagatctatt tctgagtatg tggttcatgc tgttgtgaaa aatgttttac cttttacctt
 1200
 tgtcagtttg taatgagagg atttcctttt accctttgta gctcagagag cacctgatgt
 1260
 atcatctcaa acacaataaa catgctcctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1320
 aaaaaaaa
 1327

<210> 5590

<211> 207

<212> PRT

<213> Homo sapiens

<400> 5590

Met	Ser	Ser	Asp	Arg	Gln	Arg	Ser	Asp	Asp	Glu	Ser	Pro	Ser	Thr	Ser
1			5					10						15	
Ser	Gly	Ser	Ser	Asp	Ala	Asp	Gln	Arg	Asp	Pro	Ala	Ala	Pro	Glu	Pro
			20					25					30		
Glu	Glu	Gln	Glu	Glu	Arg	Lys	Pro	Ser	Ala	Thr	Gln	Gln	Lys	Lys	Asn
			35				40					45			
Thr	Lys	Leu	Ser	Ser	Lys	Thr	Thr	Ala	Lys	Leu	Ser	Thr	Ser	Ala	Lys
			50				55				60				
Arg	Ile	Gln	Lys	Glu	Leu	Ala	Glu	Ile	Thr	Leu	Asp	Pro	Pro	Pro	Asn
65					70					75					80
Cys	Ser	Ala	Gly	Pro	Lys	Gly	Asp	Asn	Ile	Tyr	Glu	Trp	Arg	Ser	Thr
				85				90					95		
Ile	Leu	Gly	Pro	Pro	Gly	Ser	Val	Tyr	Glu	Gly	Gly	Val	Phe	Phe	Leu
			100					105					110		
Asp	Ile	Thr	Phe	Ser	Ser	Asp	Tyr	Pro	Phe	Lys	Pro	Pro	Lys	Val	Thr
			115				120					125			
Phe	Arg	Thr	Arg	Ile	Tyr	His	Cys	Asn	Ile	Asn	Ser	Gln	Gly	Val	Ile
			130				135					140			
Cys	Leu	Asp	Ile	Leu	Lys	Asp	Asn	Trp	Ser	Pro	Ala	Leu	Thr	Ile	Ser
145					150					155					160
Lys	Val	Leu	Leu	Ser	Ile	Cys	Ser	Leu	Leu	Thr	Asp	Cys	Asn	Pro	Ala
				165						170				175	
Asp	Pro	Leu	Val	Gly	Ser	Ile	Ala	Thr	Gln	Tyr	Leu	Thr	Asn	Arg	Ala
			180					185					190		
Glu	His	Asp	Arg	Ile	Ala	Arg	Gln	Trp	Thr	Lys	Arg	Tyr	Ala	Thr	

195 200 205

<210> 5591
<211> 2194
<212> DNA
<213> Homo sapiens

<400> 5591
gcggtatgc cgtctggctc tgctcgtcct gttgctcctg gggcccgcg gctggtgcct
60
tgcagaaccc ccacgcgaca gctgcgggag gaacttgtca tcaccccgct gccttcggg
120
gacgtagccg ccacattcca gttccgcacg cgttgggatt cggatctgca gcgggaagga
180
gtgtccatt acaggctctt ccctaaagcc ctgggacagc tgatctcaa gtattctcta
240
cgggagctcc acctgtcatt cagcaaggc ttttgagga cccgatactg ggggccaccc
300
ttcctgcagg ctccgtcagg tgcagagctc tgggtctggt tccaagacac tgtcactgat
360
gtggataagt cctggaggga gctcagtaat gtctctcag ggatcttctg cgcctctctc
420
aacttcacg actccaccaa cacagtcact cccactgcct ccttcaaacc cctgggtctg
480
gccaatgaca ctgaccacta ctttctgcgc tatgctgtgc tgccgcggga ggtggtctgc
540
accgaaaacc tcacccctg gaagaagctc ttgccctgta gttccaaggc aggcctctct
600
gtgctgctga aggcagatcg cttgttccac accagctacc actcccaggc agtgcatac
660
cgccctgttt gcagaaatgc acgctgtact agcatctcct gggagctgag gcagaccctg
720
tcagttgtat ttgatgcctt catcacgggg cagggaaga aagactggtc cctcttcgg
780
atgttctccc gaaccctcac ggagccctgc cccctggctt cagagagccg agtctatgtg
840
gacatcacca cctacaacca gccctgcctt tgtgtccagg acaacgagac attagaggtg
900
caccacccc cgaccactac atatcaggac gtcacctag gcactcggaa gacctatgcc
960
atctatgact tgcttgacac cgccatgatc aacaactctc gaaacctcaa catccagctc
1020
aagtgaaga gacccccaga gaatgaggcc ccccagtgc cttctctgca tgcccagcgg
1080
tacgtgagt gctatgggct gcagaagggg gagctgagca cactgctgta caacaccac
1140
ccataccggg ccttcccggt gctgctgctg gacaccgtac cctggtatct gcggctgtat
1200
gtgcacaccc tcaccatcac ctccaaggc aaggagaaca aaccaagtta catccactac
1260
cagcctgcc aggaccggt gcaacccac ctctggaga tgctgattca gctgccggcc
1320
aactcagtca ccaaggtttc catccagttt gagcgggcgc tgctgaagtg gaccgagtac
1380

acaccagatc ctaaccatgg cttctatgtc agcccatctg tcctcagcgc ctttgtgccc
 1440
 agcatggtag cagccaagcc agtggactgg gaagagagtc ccctcttcaa cagcctgttc
 1500
 ccagtctctg atggctctaa ctactttgtg cggctctaca cggagccgct gctgggtaac
 1560
 ctgccgacac cggacttcag catgccctac aacgtgatct gcctcacgtg cactgtgggtg
 1620
 gccgtgtgct acggctcctt ctacaatctc ctcacccgaa ccttcacat cgaggagccc
 1680
 cgcacagggtg gcctggccaa ggggctggcc aaccttatcc ggcgcgcccg aggtgtcccc
 1740
 ccactctgat tcttgccctt tccagcagct gcagctgccg tttctctctg gggaggggag
 1800
 cccaagggtt gtttctgcca cttgctctcc tcagagtggg cttttgaacc aaagtgcctt
 1860
 ggaccagggtc agggcctaca gctgtgttgt ccagtacagg agccacgagc caaatgtggc
 1920
 atttgaattt gaattaactt agaaattcat ttcctcacct gtagtggcca cctctatatt
 1980
 gaggtgtcga ataagcaaaa gtggctcgtg gctgctgtat tggacagcac agaaaaagat
 2040
 ttccatcacc acagaaaagg cggctggcag cactggccaa ggtgatgggg tgtgctacac
 2100
 agtgtatgtc actgtgtagt ggatggagtt tactgtttgt ggaataaaaa cggctgtttc
 2160
 cgtgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 2194

<210> 5592

<211> 580

<212> PRT

<213> Homo sapiens

<400> 5592

Met Pro Ser Gly Ser Ala Arg Pro Val Ala Pro Gly Ala Arg Arg Leu
 1 5 10 15
 Val Pro Cys Arg Thr Pro Thr Arg Gln Leu Arg Glu Glu Leu Val Ile
 20 25 30
 Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln Phe Arg Thr
 35 40 45
 Arg Trp Asp Ser Asp Leu Gln Arg Glu Gly Val Ser His Tyr Arg Leu
 50 55 60
 Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys Tyr Ser Leu Arg Glu
 65 70 75 80
 Leu His Leu Ser Phe Thr Gln Gly Phe Trp Arg Thr Arg Tyr Trp Gly
 85 90 95Pro Phe Leu
 Gln Ala Pro Ser Gly Ala Glu Leu Trp Val Trp Phe
 100 105 110
 Gln Asp Thr Val Thr Asp Val Asp Lys Ser Trp Arg Glu Leu Ser Asn
 115 120 125
 Val Leu Ser Gly Ile Phe Cys Ala Ser Leu Asn Phe Ile Asp Ser Thr
 130 135 140
 Asn Thr Val Thr Pro Thr Ala Ser Phe Lys Pro Leu Gly Leu Ala Asn


```

145          150          155          160
Asp Thr Asp His Tyr Phe Leu Arg Tyr Ala Val Leu Pro Arg Glu Val
          165          170          175
Val Cys Thr Glu Asn Leu Thr Pro Trp Lys Lys Leu Leu Pro Cys Ser
          180          185          190
Ser Lys Ala Gly Leu Ser Val Leu Leu Lys Ala Asp Arg Leu Phe His
          195          200          205
Thr Ser Tyr His Ser Gln Ala Val His Ile Arg Pro Val Cys Arg Asn
          210          215          220
Ala Arg Cys Thr Ser Ile Ser Trp Glu Leu Arg Gln Thr Leu Ser Val
225          230          235          240
Val Phe Asp Ala Phe Ile Thr Gly Gln Gly Lys Lys Asp Trp Ser Leu
          245          250          255
Phe Arg Met Phe Ser Arg Thr Leu Thr Glu Pro Cys Pro Leu Ala Ser
          260          265          270
Glu Ser Arg Val Tyr Val Asp Ile Thr Thr Tyr Asn Gln Pro Cys Leu
          275          280          285
Cys Val Gln Asp Asn Glu Thr Leu Glu Val His Pro Pro Pro Thr Thr
          290          295          300
Thr Tyr Gln Asp Val Ile Leu Gly Thr Arg Lys Thr Tyr Ala Ile Tyr
305          310          315          320
Asp Leu Leu Asp Thr Ala Met Ile Asn Asn Ser Arg Asn Leu Asn Ile
          325          330          335
Gln Leu Lys Trp Lys Arg Pro Pro Glu Asn Glu Ala Pro Pro Val Pro
          340          345          350
Phe Leu His Ala Gln Arg Tyr Val Ser Gly Tyr Gly Leu Gln Lys Gly
          355          360          365
Glu Leu Ser Thr Leu Leu Tyr Asn Thr His Pro Tyr Arg Ala Phe Pro
          370          375          380
Val Leu Leu Leu Asp Thr Val Pro Trp Tyr Leu Arg Leu Tyr Val His
385          390          395          400
Thr Leu Thr Ile Thr Ser Lys Gly Lys Glu Asn Lys Pro Ser Tyr Ile
          405          410          415
His Tyr Gln Pro Ala Gln Asp Arg Leu Gln Pro His Leu Leu Glu Met
          420          425          430
Leu Ile Gln Leu Pro Ala Asn Ser Val Thr Lys Val Ser Ile Gln Phe
          435          440          445
Glu Arg Ala Leu Leu Lys Trp Thr Glu Tyr Thr Pro Asp Pro Asn His
          450          455          460
Gly Phe Tyr Val Ser Pro Ser Val Leu Ser Ala Leu Val Pro Ser Met
465          470          475          480
Val Ala Ala Lys Pro Val Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser
          485          490          495
Leu Phe Pro Val Ser Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr
          500          505          510
Glu Pro Leu Leu Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr
          515          520          525
Asn Val Ile Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser
          530          535          540
Phe Tyr Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr
545          550          555          560
Gly Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly
          565          570          575
Val Pro Pro Leu

```

580

<210> 5593

<211> 3078

<212> DNA

<213> Homo sapiens

<400> 5593

nggacactgc agccggagtc cgggaggggc cgcgccgcca ccgtctgaac taggatgtcc
60
cgacatgaag gtgtcagctg tgatgcatgt ttaaaaggaa attttcgagg tcgcagatat
120
aagtgtttaa tttgctacga ttacgatctt tgtgcatctt gttatgaaag tgggtcaaca
180
acaacaaggc atacaactga ccaccaatg cagtgcatat taacaagggt agattttgat
240
ttatactatg gtggggaagc tttctctgta gagcagccac agtcttttac ttgtccctat
300
tgtggaaaaa tgggctatac ggagacatct cttcaagaac atgttacttc tgaacatgca
360
gaaacatcaa cagaagtgat ttgtccaata tgtgcagcgt tacctggagg cgatccta
420
catgtcacgg atgactttgc agtcatctt acacttgaac acagagcccc tagagattta
480
gatgaatcga gtggtgttcg acatgtacgt agaatgtttc accctggccg gggattagga
540
ggtcctcgtg ctcgtagatc aaacatgcac tttactagca gttctactgg tggactttct
600
tcttctcaga gttcatattc tccaagcaat agggaagcca tggatcctat agctgagctt
660
ttatctcagt tatcaggagt gagacgttct gcaggaggac agcttaattc ctctggccct
720
tccgcttctc agttacaaca actgcagatg cagctgcagc tagaacggca gcatgccag
780
gcagcacggc aacaactgga gaccgcacgc aacgcaaccc ggcgtactaa cacaagcagt
840
gtcaccacta caatcacaca atccacagca acaaccaaca tagctaatac agaaagcagt
900
cagcagactc tacagaattc ccagtttctt ttaacaagggt tgaatgatcc taaaatgtct
960
gaaacggagc gccagtccat ggaaagcgag cgtgcagacc gcagcctgtt tgtccaagag
1020
ctccttctgt ccactttagt gcgtgaagag agtcatcct cagatgagga tgatcggggg
1080
gagatggcag attttgggtg tatgggctgt gtagatatta tgcctttaga tgttgcttta
1140
gaaaaccta atttaaaaga gagtaataaa ggaaatgagc ctccaccacc tcctctttga
1200
tgacatccca attcgcagac aatgtcctct gtgctgtatt tgccaatgaa agtggacaac
1260
aactatcttg ggtttgtttg gtgattgtaa tttcaggtct gtcactcttg ttacattgtg
1320
tacattcaaa aggaagagag aaaatatata tgataatcat ttccacttaa ctaattttta
1380

cttctagcag gtaaagttag gtagcagtgc aggggtgac tctgcttct gtaccttgac
1440
atgcaaaagg ctctcctaact actccacatt caaactgaag aggaaaattg aaatctctaa
1500
tgaagctgct gtgtgtatatt atgaatatta atgaataaaa actgcttgga tggtttacct
1560
taactactgc atgagggtttt ttgcagcgtg catgagtttt agtgacctg ttatttaaga
1620
agttaaatac aaggagtaaa acttaaaaaa aaaatacaaa gcccaaagct tcccaaaca
1680
ttattcaatg gttacacgac gaagtagctt ttgaataatg tctgcctgaa tcacctttct
1740
ttgtgtgcct cctacgcaca aagccagctc tgcagtggaa tctggggatt atagccgggt
1800
gtggcactcc gccctgtgtg actgtcctgt cgcctgtta gtcactctgc ctgtgtggag
1860
ctcagcctgt ctctttaact catctgtaga agacacacca gtaaagctac tgttggaaac
1920
tgctgcaggg gcctttgtgt gccctaaaaa caaatcctgt tcatgtttgt ttaaagtttt
1980
tactttttgt ggttgtttta aattttttca attgttaaat atgtttttatt caggtgtaga
2040
tgaatttcat ttattgactg ttcaacagag ttaacctgaa ttatgttgct tttgttttta
2100
aaaatctcac attctcaatc atattttgca ttatttatgt atttgctttg tagtttgctg
2160
agacagatca gtatcagggg agctttgagg atttgccctc ccagatttgt cagtatatta
2220
caaccaaatt cttaatgcta attttagcac cttttattta ttgggttttt tctggcataa
2280
aaagtaaagc cttttaattg aatcatgcc cctatatgcc tatattatta atcctatgtg
2340
taaaaaaaat gtacagcttt ttttgggttt gttttggggt ttggaagggc cgggttattt
2400
tttttttctt gtttcagttt ttgtgcatag actttcaca tagctccaag gcagggacag
2460
cgggtttggg ggttgggagg gcagtttttg gaatgtaaat ttaggacttt taaaaagggtg
2520
cgcacagctt ctgataaatt tataactaga cttaacctaa tcatgtctcg ttccagttct
2580
cttttctctg agcccttttc aaagtctcct ctctttctcc tgtcatcctt ttcctttcct
2640
gtccgtgtat ctccgtttct tcaacatgac aagcatacag acttgaacac ccctccgggtg
2700
ttcttccgag aactgtgaag tccatgttca tccaaatgta accaaaaaag aagtcaccct
2760
acatgtctga aaaactgttg cttctcctct gaaacttcaa actccaacga tttccaaata
2820
caatagcttt gttttcttta gttctgtaat ggataatgtt taaaggaaaa ctttacacca
2880
ggcttctggt tacactagaa gtcaagccca ttagggattt tcattttttt tcatttggtt
2940
gttgagaagt ttcaaaaatc agttttcaag ctgtgggtctt tcaaacacat ctgcacataa
3000

gtcacacatt tcaataaagc attttcaaga ctgttgaaaa aaaaaaaaaa aaaaaaaaaa
 3060
 aaaaaaaaaa aaaaaaaaaa
 3078

<210> 5594
 <211> 296
 <212> PRT
 <213> Homo sapiens

<400> 5594
 Met Gly Tyr Thr Glu Thr Ser Leu Gln Glu His Val Thr Ser Glu His
 1 5 10 15
 Ala Glu Thr Ser Thr Glu Val Ile Cys Pro Ile Cys Ala Ala Leu Pro
 20 25 30
 Gly Gly Asp Pro Asn His Val Thr Asp Asp Phe Ala Ala His Leu Thr
 35 40 45
 Leu Glu His Arg Ala Pro Arg Asp Leu Asp Glu Ser Ser Gly Val Arg
 50 55 60
 His Val Arg Arg Met Phe His Pro Gly Arg Gly Leu Gly Gly Pro Arg
 65 70 75 80
 Ala Arg Arg Ser Asn Met His Phe Thr Ser Ser Ser Thr Gly Gly Leu
 85 90 95
 Ser Ser Ser Gln Ser Ser Tyr Ser Pro Ser Asn Arg Glu Ala Met Asp
 100 105 110
 Pro Ile Ala Glu Leu Leu Ser Gln Leu Ser Gly Val Arg Arg Ser Ala
 115 120 125
 Gly Gly Gln Leu Asn Ser Ser Gly Pro Ser Ala Ser Gln Leu Gln Gln
 130 135 140
 Leu Gln Met Gln Leu Gln Leu Glu Arg Gln His Ala Gln Ala Ala Arg
 145 150 155 160
 Gln Gln Leu Glu Thr Ala Arg Asn Ala Thr Arg Arg Thr Asn Thr Ser
 165 170 175
 Ser Val Thr Thr Thr Ile Thr Gln Ser Thr Ala Thr Thr Asn Ile Ala
 180 185 190
 Asn Thr Glu Ser Ser Gln Gln Thr Leu Gln Asn Ser Gln Phe Leu Leu
 195 200 205
 Thr Arg Leu Asn Asp Pro Lys Met Ser Glu Thr Glu Arg Gln Ser Met
 210 215 220
 Glu Ser Glu Arg Ala Asp Arg Ser Leu Phe Val Gln Glu Leu Leu Leu
 225 230 235 240
 Ser Thr Leu Val Arg Glu Glu Ser Ser Ser Asp Glu Asp Asp Arg
 245 250 255
 Gly Glu Met Ala Asp Phe Gly Ala Met Gly Cys Val Asp Ile Met Pro
 260 265 270
 Leu Asp Val Ala Leu Glu Asn Leu Asn Leu Lys Glu Ser Asn Lys Gly
 275 280 285
 Asn Glu Pro Pro Pro Pro Pro Leu
 290 295

<210> 5595
 <211> 1515
 <212> DNA
 <213> Homo sapiens

<400> 5595
ntgatccctg gctcagacag ttcagtggga gaatccaaag gccttttccc tccttcctga
60
gcctccggga aaggagggag ggatcttggt tccagggctc cagtaccccc tgtgccatth
120
gagctgcttg cgctcatcat ctctattaat aaccaacttc cctccccccac tgccagtgtc
180
gcccccacgc ctgcccagct cgtgttctcc ggtcacagca gctcagtcct ccaaagctgc
240
tggaccccag gggagagctg accactgccc gagcagccgg ctgaatccac ctccacaatg
300
ccgtctctcag gaaccccggc ccctaataag aagaggaaat ccagcaagct gatcatggaa
360
ctcactggag gtggacagga gagctcaggc ttgaacctgg gcaaaaagat cagtgtccca
420
agggatgtga tgttgaggga actgtcgtcg cttaccaacc ggggctccaa gatgttcaaa
480
ctgcggcaga tgagggtgga gaagtttatt tatgagaacc accctgatgt tttctctgac
540
agctcaatgg atcacttcca gaagttcctt ccaacagtgg ggggacagct gggcacagct
600
ggtcagggat tctcatacag caagagcaac ggcagaggcg gcagccaggc agggggcagt
660
ggctctgccg gacagtatgg ctctgatcag cagcaccatc tgggctctgg gtctggagct
720
gggggtacag gtgggtccgc gggccaggct ggcagaggag gagctgctgg cacagcaggg
780
gttggtgaga caggatcagg agaccaggca ggcggagaag gaaaacatat cactgtgttc
840
aagacctata tttccccatg ggagcgagcc atgggggttg acccccagca aaaaatggaa
900
cttggcattg acctgctggc ctatggggcc aaagctgaac ttcccaaata taagtccttc
960
aacaggacgg caatgcccta tgggtggatat gagaaggcct ccaaacgcat gaccttccag
1020
atgcccaagt ttgacctggg gcccttgctg agtgaacccc tggtcctcta caacaaaac
1080
ctctccaaca ggccttcttt caatcgaacc cctattccct ggctgagctc tggggagcct
1140
gtagactaca acgtggatat tggcatcccc ttggatggag aaacagagga gctgtgaggt
1200
gtttcctcct ctgatttgca tcatttcccc tctctggctc caatttggag agggaatgct
1260
gagcagatag cccccattgt taatccagta tccttatggg aatggagggg aaaaggagag
1320
atctaccttt ccataccttta ctccaagtcc cactccacg catccttcct caccaactca
1380
gagctcccc tctacttgct ccatatggaa cctgctcgtt tatggaattt gctctgccac
1440
cagtaacagt caataaactt caaggaaaat gaactcatc ttcctttgat atttgagagc
1500
agatgaaagc cgagg
1515

<210> 5596
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 5596
 Met Pro Leu Ser Gly Thr Pro Ala Pro Asn Lys Lys Arg Lys Ser Ser
 1 5 10 15
 Lys Leu Ile Met Glu Leu Thr Gly Gly Gln Glu Ser Ser Gly Leu
 20 25 30
 Asn Leu Gly Lys Lys Ile Ser Val Pro Arg Asp Val Met Leu Glu Glu
 35 40 45
 Leu Ser Leu Leu Thr Asn Arg Gly Ser Lys Met Phe Lys Leu Arg Gln
 50 55 60
 Met Arg Val Glu Lys Phe Ile Tyr Glu Asn His Pro Asp Val Phe Ser
 65 70 75 80
 Asp Ser Ser Met Asp His Phe Gln Lys Phe Leu Pro Thr Val Gly Gly
 85 90 95
 Gln Leu Gly Thr Ala Gly Gln Gly Phe Ser Tyr Ser Lys Ser Asn Gly
 100 105 110
 Arg Gly Gly Ser Gln Ala Gly Gly Ser Gly Ser Ala Gly Gln Tyr Gly
 115 120 125
 Ser Asp Gln Gln His His Leu Gly Ser Gly Ser Gly Ala Gly Gly Thr
 130 135 140
 Gly Gly Pro Ala Gly Gln Ala Gly Arg Gly Gly Ala Ala Gly Thr Ala
 145 150 155 160
 Gly Val Gly Glu Thr Gly Ser Gly Asp Gln Ala Gly Gly Glu Gly Lys
 165 170 175
 His Ile Thr Val Phe Lys Thr Tyr Ile Ser Pro Trp Glu Arg Ala Met
 180 185 190
 Gly Val Asp Pro Gln Gln Lys Met Glu Leu Gly Ile Asp Leu Leu Ala
 195 200 205
 Tyr Gly Ala Lys Ala Glu Leu Pro Lys Tyr Lys Ser Phe Asn Arg Thr
 210 215 220
 Ala Met Pro Tyr Gly Gly Tyr Glu Lys Ala Ser Lys Arg Met Thr Phe
 225 230 235 240
 Gln Met Pro Lys Phe Asp Leu Gly Pro Leu Leu Ser Glu Pro Leu Val
 245 250 255
 Leu Tyr Asn Gln Asn Leu Ser Asn Arg Pro Ser Phe Asn Arg Thr Pro
 260 265 270
 Ile Pro Trp Leu Ser Ser Gly Glu Pro Val Asp Tyr Asn Val Asp Ile
 275 280 285
 Gly Ile Pro Leu Asp Gly Glu Thr Glu Glu Leu
 290 295

<210> 5597
 <211> 2240
 <212> DNA
 <213> Homo sapiens

<400> 5597
 ctctaatccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
 60

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcattgta ttcagactct
120
ttagcatata cagtagagtt tctaattgtg tcagcattcc ctagtgggcg gttacaagtt
180
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg
240
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga
300
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcattcc
360
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgtaaccgg caatgagggc
420
cgcgtgtctg tggaaaacat caagcagctg ttgcaatctg ccacaaaaga atccagcttt
480
gacattattt tgtcaggttt agtcccagga agcaccactc tgcacagtgc tgagattttg
540
gctgaaatcg cccggatcct tcggcctggt ggatgtcttt ttctgaagga gccagtagag
600
acagctgtag ataacaatag caaagtgaag acagcatcta agctgtgttc agccctgact
660
ctttctggtc ttgtggaagt gaaagagctg cagcgggagc ccctaacccc tgaggaagta
720
cagtctgttc gagaacacct tggatcatgaa agtgacaacc tgctgtttgt tcagatcaca
780
ggcaaaaaac caaactttga agtgggttct tctaggcagc ttaagctttc catcaccaag
840
aagtcttctc cttcagtgaac acctgctgtg gacctgctg ctgccaagct gtggaccctc
900
tcagccaacg atatggagga cgacagcatg gatctcattg actcagatga gctgctggat
960
ccagaagatt tgaagaagcc agatccagct tcctgcggg ctgcttcttg tggggaaggg
1020
aaaaagagga aggcctgtaa gaactgcacc tgtggccttg ccgaagaact ggaaaaagag
1080
aagtcaaggg aacagatgag ctcccaaccc aagtcagctt gtggaaactg ctacctgggc
1140
gatgccttcc gctgtgccag ctgccctac cttgggatgc cagccttcaa acctggggaa
1200
aagggtgctt tgagtgatag caatcttcat gatgcctagg aggttcctga catgggaccc
1260
atctgtctct ccagccaact cctgtccctc acatcccacc atggtggctc ctcccacctc
1320
ctctggattt gttcactctg agatctgttt gcagagtggg tgcttagcag acagagtga
1380
gctggctggg gggcacagtg gtgtgtagtg ctgctgtgta tcaaaagacc aaggtattat
1440
gggacctggt ttcagaatgg gatgggttct ttcacctcat gttaagagaa gggagtgtgt
1500
cctgaagaag cccttcttct gatgttaaaa tgctgaccag aacgtcttg agcccaggca
1560
tcgttgagca ttaacactct gtgacagagc tgcagacccc tgccttgagt ctcatctcag
1620
caatgctgcc acctcttgt ctttcagagt tgtagttta ctccattctt tgtgacacga
1680

gtcaagtggc tcacaacctc ctcaaggcac cagaggactc actcactggg tgctgtgatg
 1740
 atatccagtg tccctctgcc cccttccatc cccaaccaca ttgactgta gcattgcac
 1800
 tgtgtcctgt tgtcatatat gttaaccttc aggtattaaa cttgtgcat atcttgacat
 1860
 atcttgagat tctgcatgtc ttgtaaagag aggggatgtg catttgtgtg tgatgttgga
 1920
 tagtcatcca cgctcagttt ggaccattgg aggaacttag tgtcacgcac aaatggggct
 1980
 attcctacgc ttagaatagg gcttgtctgc ccactttaga agagtccagg ttggtgagca
 2040
 ttttagagga agcagggcag aactctgaac gacaatacgt ctctctgagc agagaccct
 2100
 ttgttcttgt tatccacca tatggacttg gaatcaatct tgccaaatat ttggagagat
 2160
 tgtgtggatt taagagacct ggatttttat attttaccag taaataaaag ttttcattga
 2220
 tatctgtcct tgaaaaaaaa
 2240

<210> 5598

<211> 312

<212> PRT

<213> Homo sapiens

<400> 5598

Met	Ala	Asp	Phe	Gly	Ile	Ser	Ala	Gly	Gln	Phe	Val	Ala	Val	Val	Trp
1				5					10					15	
Asp	Lys	Ser	Ser	Pro	Val	Glu	Ala	Leu	Lys	Gly	Leu	Val	Asp	Lys	Leu
			20					25					30		
Gln	Ala	Leu	Thr	Gly	Asn	Glu	Gly	Arg	Val	Ser	Val	Glu	Asn	Ile	Lys
		35					40					45			
Gln	Leu	Leu	Gln	Ser	Ala	His	Lys	Glu	Ser	Ser	Phe	Asp	Ile	Ile	Leu
		50				55					60				
Ser	Gly	Leu	Val	Pro	Gly	Ser	Thr	Thr	Leu	His	Ser	Ala	Glu	Ile	Leu
65					70					75				80	
Ala	Glu	Ile	Ala	Arg	Ile	Leu	Arg	Pro	Gly	Gly	Cys	Leu	Phe	Leu	Lys
			85						90					95	
Glu	Pro	Val	Glu	Thr	Ala	Val	Asp	Asn	Asn	Ser	Lys	Val	Lys	Thr	Ala
			100					105					110		
Ser	Lys	Leu	Cys	Ser	Ala	Leu	Thr	Leu	Ser	Gly	Leu	Val	Glu	Val	Lys
		115					120					125			
Glu	Leu	Gln	Arg	Glu	Pro	Leu	Thr	Pro	Glu	Glu	Val	Gln	Ser	Val	Arg
		130				135					140				
Glu	His	Leu	Gly	His	Glu	Ser	Asp	Asn	Leu	Leu	Phe	Val	Gln	Ile	Thr
145					150					155				160	
Gly	Lys	Lys	Pro	Asn	Phe	Glu	Val	Gly	Ser	Ser	Arg	Gln	Leu	Lys	Leu
			165					170						175	
Ser	Ile	Thr	Lys	Lys	Ser	Ser	Pro	Ser	Val	Lys	Pro	Ala	Val	Asp	Pro
		180						185					190		
Ala	Ala	Ala	Lys	Leu	Trp	Thr	Leu	Ser	Ala	Asn	Asp	Met	Glu	Asp	Asp
		195					200					205			
Ser	Met	Asp	Leu	Ile	Asp	Ser	Asp	Glu	Leu	Leu	Asp	Pro	Glu	Asp	Leu


```

      210              215              220
Lys Lys Pro Asp Pro Ala Ser Leu Arg Ala Ala Ser Cys Gly Glu Gly
225              230              235              240
Lys Lys Arg Lys Ala Cys Lys Asn Cys Thr Cys Gly Leu Ala Glu Glu
      245              250              255
Leu Glu Lys Glu Lys Ser Arg Glu Gln Met Ser Ser Gln Pro Lys Ser
      260              265              270
Ala Cys Gly Asn Cys Tyr Leu Gly Asp Ala Phe Arg Cys Ala Ser Cys
      275              280              285
Pro Tyr Leu Gly Met Pro Ala Phe Lys Pro Gly Glu Lys Val Leu Leu
      290              295              300
Ser Asp Ser Asn Leu His Asp Ala
305              310

```

<210> 5599

<211> 4492

<212> DNA

<213> Homo sapiens

<400> 5599

```

ttcccgccc cagccaaggc tgtcgtttac gtgtcggaca ttcaggagct gtacatccgt
60
gtggttgaca aggtggagat tgggaagaca gtgaaggcat acgtccgcgt gctggacttg
120
cacaagaagc ccttccttgc caaatacttc ccctttatgg acctgaagct ccgagcagcc
180
tccccgatca ttacattggt ggcccttgat gaagcccttg acaactacac catcacattc
240
ctcatccgcg gtgtggccat cggccagacc agtctaactg caagtgtgac caataaagct
300
ggacagagaa tcaactcagc cccacaacag attgaagtct tcccccggt caggctgatg
360
cccaggaagg tgacactgct tatcggggcc acgatgcagg tcacctccga gggcggcccc
420
cagcctcagt ccaacatcct tttctccatc agcaatgaga gcgttgcgct ggtgagcgct
480
gctgggctgg tacagggcct cgccatcggg aacggcactg tgtctgggct cgtgcaggca
540
gtggatgcag agaccggcaa ggtggtcata atctctcagg acctcgtgca ggtggagggtg
600
ctgctgctaa gggccgtgag gatccgcgcc cccatcatgc ggatgaggac gggcaccag
660
atgccatct atgtcaccgg catcaccaac caccagaacc ctttctcctt tggcaatgcc
720
gtgccaggcc tgaccttcca ctggtctgtc accaagcggg acgtcctgga cctccgaggg
780
cggcaccacg aggcgtcgat ccgactcccg tcacagtaca actttgccat gaacgtgctc
840
ggccgggtaa aaggccggac cgggctgagg gtggtggtca aggctgtgga cccacatcg
900
gggcagctgt atggcctggc cagagaactc tcggatgaga tccaagtcca ggtgttttag
960
aagctgcagc tgctcaaccc tgaaatagaa gcagaacaaa tattaatgtc gcccaactca
1020

```

tatataaagc tgcagacaaa cagggatggt gcagcctctc tgagctaccg cgtcctggat
1080
ggacccgaaa aggttccagt tgtgcatggt gatgagaaag gctttctagc atcaggggtct
1140
atgatcggga catccaccat cgaagtgatt gcacaagagc cctttggggc caaccaaacc
1200
atcattgttg ctgtaaaggt atccccgttt tcctacctga gggtttccat gagccctgtc
1260
ctgcacaccc agaacaagga ggccctgggt gccgtgcctt tgggaatgac cgtgaccttc
1320
actgtccact tccacgacaa ctctggagat gtcttccatg ctcacagttc ggtcctcaac
1380
tttgccacta acagagacga ctttgtgcag atcgggaagg gccccaccaa caacacctgt
1440
gttgtccgca cagtcagcgt gggcctgaca ctgctccgtg tgtgggacgc agagcacccg
1500
ggcctctcgg acttcatgcc cctgcctgtc ctacaggcca tctccccaga gctgtctggg
1560
gccatggtgg tgggggacgt gctctgtctg gccactgttc tgaccagcct ggaaggcctc
1620
tcaggaacct ggagctcctc ggccaacagc atcctccaca tcgaccccaa gacgggtgtg
1680
gctgtggccc gggcctgggg atccgtgacg gtttactatg aggtcgtctg gcacctgagg
1740
acctacaagg aggtggtggt cagcgtccct cagaggatca tggcccgtca cctccacccc
1800
atccagacaa gcttccagga ggctacagcc tccaaagtga ttgttgccgt gggagacaga
1860
agctctaacc tgagaggcga gtgcaccccc acccagaggg aagtcatcca ggcttgcac
1920
ccagagaccc tcatcagctg ccagtcccag ttcaagccgg cgtctttga tttcccatct
1980
caagatgtgt tcaccgtgga gccacagttt gacactgttc tcggccagta cttctgctca
2040
atcacaatgc acaggctgac ggacaagcag cggaagcacc tgagcatgaa gaagacagct
2100
ctgggtgtca gtgcctccct ctccagcagc cacttctcca cagagcaggt gggggccgag
2160
gtgcccttca gccaggtct cttcgccgac caggctgaaa tccttttgag caaccactac
2220
accagtcccg agatcagggg ctttgggtgcc ccggagggtc tggagaactt ggaggtgaaa
2280
tccgggtccc cggcctgtct ggcattcgca aaggagaagt cttttgggtg gccagcttc
2340
atcacataca cggtcggcgt ctcggacccc gcggctggca gccaaaggcc tctgtccact
2400
accctgacct tctccagccc cgtgaccaac caagccattg ccatcccagt gacagtggct
2460
tttgtgatgg atcgccgtgg gcccggtcct tatggagcca gcctcttcca gcacttcctg
2520
gattcctacc aggtcatggt cttcacgctc ttcgccctgt tggctgggac agcggtcagt
2580
atcatagcct accacactgt ctgcacgccc cgggatcttg ctgtgcctgc agccctcacg
2640

cctcgagcca gccctggaca cagccccac tatttcgctg cctcatcacc cacatctccc
2700
aatgcattgc ctctgctcg caaagccagc cctccctcag ggctgtggag cccagcctat
2760
gcctccact aggccgctg aaggttcccg gaggatgggt ctcagccgag cctcgtgcac
2820
ccccaagatg gaacatccct gctgcattca cactggaaca agcccccca gatgagtgcc
2880
ccggccccag gccagcttca ctgccgtctc ttcacacaga gctgtagttt cggctctgcc
2940
cattagctca ttttatgtag gagttttaaa tgtgtgtttt tttcctttca agtcttacia
3000
agctaagact ttttggtcctc ttcctttttg catgggtgtc tagggtttct ggacaatgtg
3060
ctgttgcat tttattttcc tagccttgct aaaatcttcc ccttctcaag actttgagca
3120
gttagaagtg ctcttttagaa gttgtctgtg ggtgatgtta ctgtagtggc ctcagggaaa
3180
ggattgtcca gttacttttag ggggtttttg gtgggggtttt tccccctgtg aaaacttact
3240
ttgcccctag tctggctgct gctaggactt ctgaggagca atgggacatg agtgtccctg
3300
tatctgcgcc actgccgcaa gggaagcctc aggaaccagc acctggaggc caggatagcc
3360
aagccctggg tgagcgagag gctggagaac acaggagctc acccagggtc gctgccaac
3420
catgggccac tgtgaacaga cttcagtcct ctgtttttgt ttcataagcc gttgagacat
3480
ctgatggact tggcttaggc cctgctggga catcccacgt gtgatccctt tcaactccatc
3540
aggacaccag gactgtcctt aggaataatgt ccttgagatg gcagcaggag tcatattttc
3600
tgtgtgtgtg tttcgaaag ccgctgtgtc ctgcctcagc acaaagacc agtgtcattt
3660
gtcctcctg ttcctgtgcc actccagaac ctcagcagat ctgagccacc gcctgccagt
3720
gtgagaggcg gccactttca tggcagctca tcaggcgcag ggccccagac agcttcccag
3780
caggccctag agccccgcct gggccaatga tggaggcgcg ccaccagccc agggcctgcc
3840
catccagaag ggactcccca gggcctgggg gaggagacc ttggaaaagt cctctcttcc
3900
cagctcctga ttctggatct gagattctca gatcacaggc ccctgtgctc caggccgagg
3960
ctgggctacc ctcagggaga tccagagact catgcccatt gccatccatt cgtggacgct
4020
gtgtggagag tccaggatga cgggatcccg cacaagctcc cttcagtcct tcagggtgtg
4080
gccatgtggt tgatttttct aaagctggag aaaggaagaa ttgtgccttg catattactt
4140
gagcttaaac tgacaacctg gatgtaaata ggagcctttc tactgggtta ttaataaag
4200
ttctatgtgc cagtggcttt tgtggtggat cgccgtgggc ccggtcctta tggagccagc
4260

ctcttccagc acttcctgga ttcctaccag gtcattgttct tcacgctctt cgcctgttg
 4320
 gctgggacag cggatcatgat catagcctac cacactgtct gcagctttat atatgagttg
 4380
 ggcgacatta atatttggtc tgcttctatt tcagggttga gcagctgcag cttctcaaac
 4440
 acctggactt ggatctcatc cgagagttct ctggccaggc catacagctg gc
 4492

<210> 5600

<211> 923

<212> PRT

<213> Homo sapiens

<400> 5600

Phe	Pro	Ala	Pro	Ala	Lys	Ala	Val	Val	Tyr	Val	Ser	Asp	Ile	Gln	Glu
1				5					10					15	
Leu	Tyr	Ile	Arg	Val	Val	Asp	Lys	Val	Glu	Ile	Gly	Lys	Thr	Val	Lys
			20					25					30		
Ala	Tyr	Val	Arg	Val	Leu	Asp	Leu	His	Lys	Lys	Pro	Phe	Leu	Ala	Lys
			35				40					45			
Tyr	Phe	Pro	Phe	Met	Asp	Leu	Lys	Leu	Arg	Ala	Ala	Ser	Pro	Ile	Ile
			50			55					60				
Thr	Leu	Val	Ala	Leu	Asp	Glu	Ala	Leu	Asp	Asn	Tyr	Thr	Ile	Thr	Phe
65					70					75					80
Leu	Ile	Arg	Gly	Val	Ala	Ile	Gly	Gln	Thr	Ser	Leu	Thr	Ala	Ser	Val
				85					90					95	
Thr	Asn	Lys	Ala	Gly	Gln	Arg	Ile	Asn	Ser	Ala	Pro	Gln	Gln	Ile	Glu
			100					105					110		
Val	Phe	Pro	Pro	Phe	Arg	Leu	Met	Pro	Arg	Lys	Val	Thr	Leu	Leu	Ile
			115				120						125		
Gly	Ala	Thr	Met	Gln	Val	Thr	Ser	Glu	Gly	Gly	Pro	Gln	Pro	Gln	Ser
			130				135				140				
Asn	Ile	Leu	Phe	Ser	Ile	Ser	Asn	Glu	Ser	Val	Ala	Leu	Val	Ser	Ala
145					150					155					160
Ala	Gly	Leu	Val	Gln	Gly	Leu	Ala	Ile	Gly	Asn	Gly	Thr	Val	Ser	Gly
				165					170					175	
Leu	Val	Gln	Ala	Val	Asp	Ala	Glu	Thr	Gly	Lys	Val	Val	Ile	Ile	Ser
			180				185						190		
Gln	Asp	Leu	Val	Gln	Val	Glu	Val	Leu	Leu	Leu	Arg	Ala	Val	Arg	Ile
			195				200					205			
Arg	Ala	Pro	Ile	Met	Arg	Met	Arg	Thr	Gly	Thr	Gln	Met	Pro	Ile	Tyr
			210				215					220			
Val	Thr	Gly	Ile	Thr	Asn	His	Gln	Asn	Pro	Phe	Ser	Phe	Gly	Asn	Ala
225					230					235					240
Val	Pro	Gly	Leu	Thr	Phe	His	Trp	Ser	Val	Thr	Lys	Arg	Asp	Val	Leu
				245					250					255	
Asp	Leu	Arg	Gly	Arg	His	His	Glu	Ala	Ser	Ile	Arg	Leu	Pro	Ser	Gln
			260				265					270			
Tyr	Asn	Phe	Ala	Met	Asn	Val	Leu	Gly	Arg	Val	Lys	Gly	Arg	Thr	Gly
			275				280					285			
Leu	Arg	Val	Val	Val	Lys	Ala	Val	Asp	Pro	Thr	Ser	Gly	Gln	Leu	Tyr
			290				295				300				
Gly	Leu	Ala	Arg	Glu	Leu	Ser	Asp	Glu	Ile	Gln	Val	Gln	Val	Phe	Glu

```

305          310          315          320
Lys Leu Gln Leu Leu Asn Pro Glu Ile Glu Ala Glu Gln Ile Leu Met
          325          330          335
Ser Pro Asn Ser Tyr Ile Lys Leu Gln Thr Asn Arg Asp Gly Ala Ala
          340          345          350
Ser Leu Ser Tyr Arg Val Leu Asp Gly Pro Glu Lys Val Pro Val Val
          355          360          365
His Val Asp Glu Lys Gly Phe Leu Ala Ser Gly Ser Met Ile Gly Thr
          370          375          380
Ser Thr Ile Glu Val Ile Ala Gln Glu Pro Phe Gly Ala Asn Gln Thr
385          390          395          400
Ile Ile Val Ala Val Lys Val Ser Pro Val Ser Tyr Leu Arg Val Ser
          405          410          415
Met Ser Pro Val Leu His Thr Gln Asn Lys Glu Ala Leu Val Ala Val
          420          425          430
Pro Leu Gly Met Thr Val Thr Phe Thr Val His Phe His Asp Asn Ser
          435          440          445
Gly Asp Val Phe His Ala His Ser Ser Val Leu Asn Phe Ala Thr Asn
          450          455          460
Arg Asp Asp Phe Val Gln Ile Gly Lys Gly Pro Thr Asn Asn Thr Cys
465          470          475          480
Val Val Arg Thr Val Ser Val Gly Leu Thr Leu Leu Arg Val Trp Asp
          485          490          495
Ala Glu His Pro Gly Leu Ser Asp Phe Met Pro Leu Pro Val Leu Gln
          500          505          510
Ala Ile Ser Pro Glu Leu Ser Gly Ala Met Val Val Gly Asp Val Leu
          515          520          525
Cys Leu Ala Thr Val Leu Thr Ser Leu Glu Gly Leu Ser Gly Thr Trp
          530          535          540
Ser Ser Ser Ala Asn Ser Ile Leu His Ile Asp Pro Lys Thr Gly Val
545          550          555          560
Ala Val Ala Arg Ala Val Gly Ser Val Thr Val Tyr Tyr Glu Val Ala
          565          570          575
Gly His Leu Arg Thr Tyr Lys Glu Val Val Val Ser Val Pro Gln Arg
          580          585          590
Ile Met Ala Arg His Leu His Pro Ile Gln Thr Ser Phe Gln Glu Ala
          595          600          605
Thr Ala Ser Lys Val Ile Val Ala Val Gly Asp Arg Ser Ser Asn Leu
          610          615          620
Arg Gly Glu Cys Thr Pro Thr Gln Arg Glu Val Ile Gln Ala Leu His
625          630          635          640
Pro Glu Thr Leu Ile Ser Cys Gln Ser Gln Phe Lys Pro Ala Val Phe
          645          650          655
Asp Phe Pro Ser Gln Asp Val Phe Thr Val Glu Pro Gln Phe Asp Thr
          660          665          670
Ala Leu Gly Gln Tyr Phe Cys Ser Ile Thr Met His Arg Leu Thr Asp
          675          680          685
Lys Gln Arg Lys His Leu Ser Met Lys Lys Thr Ala Leu Val Val Ser
          690          695          700
Ala Ser Leu Ser Ser Ser His Phe Ser Thr Glu Gln Val Gly Ala Glu
705          710          715          720
Val Pro Phe Ser Pro Gly Leu Phe Ala Asp Gln Ala Glu Ile Leu Leu
          725          730          735
Ser Asn His Tyr Thr Ser Ser Glu Ile Arg Val Phe Gly Ala Pro Glu

```

```
<210> 5601
<211> 670
<212> DNA
<213> Homo sapiens
```

```

<400> 5601
ggccgtaact gctgccatct tctccgcgct atggctgcgt tcggccgtca ggtccttgat
60
tggcaccgcc tgatccccct cacctgggcc tgtatggcta ggcagactcg tcatcttgga
120
gaacagagaa ggacgacagc ttctttgttg cgaaaactga ctacagcctc caatggaggg
180
gtcattgagg agttatcttg tgttagatcc aataactatg tgcaggaacc agagtgcagg
240
aggaatcttg ttcagtgcct ccttgagaag caggggactc ctgtggtaca agggtccttg
300
gagctagaga gggtcattgag ttccctcctg gacatggggt tcagcaatgc ccatattaat
360
gaattgctca gtgtacggcg aggtgccagt cttcaacagt tgctggacat catttcagaa
420
tttattctct tgggtctgaa tccagagcct gtgtgtgtgg tcttgaagaa aagtccccag
480
ttattgaaac tgcctattat gcaaattgagg aagcgctcca gttacctgca aaagcttggg
540
cttgagagaag ggaaattaaa gaggggtgctt tactgttgcc ctgaaatctt caccatgcgc
600
cagcaggaca ttaacgacac tgtcaggctt ctcaaggaga agtgcctttt cacgggtacc
660
cttcacgcgt
670

```

<210> 5602
 <211> 213
 <212> PRT
 <213> Homo sapiens

<400> 5602
 Met Ala Ala Phe Gly Arg Gln Val Leu Asp Trp His Arg Leu Ile Pro
 1 5 10 15
 Leu Thr Trp Ala Cys Met Ala Arg Gln Thr Arg His Leu Gly Glu Gln
 20 25 30
 Arg Arg Thr Thr Ala Ser Leu Leu Arg Lys Leu Thr Thr Ala Ser Asn
 35 40 45
 Gly Gly Val Ile Glu Glu Leu Ser Cys Val Arg Ser Asn Asn Tyr Val
 50 55 60
 Gln Glu Pro Glu Cys Arg Arg Asn Leu Val Gln Cys Leu Leu Glu Lys
 65 70 75 80
 Gln Gly Thr Pro Val Val Gln Gly Ser Leu Glu Leu Glu Arg Val Met
 85 90 95
 Ser Ser Leu Leu Asp Met Gly Phe Ser Asn Ala His Ile Asn Glu Leu
 100 105 110
 Leu Ser Val Arg Arg Gly Ala Ser Leu Gln Gln Leu Leu Asp Ile Ile
 115 120 125
 Ser Glu Phe Ile Leu Leu Gly Leu Asn Pro Glu Pro Val Cys Val Val
 130 135 140
 Leu Lys Lys Ser Pro Gln Leu Leu Lys Leu Pro Ile Met Gln Met Arg
 145 150 155 160
 Lys Arg Ser Ser Tyr Leu Gln Lys Leu Gly Leu Gly Glu Gly Lys Leu
 165 170 175
 Lys Arg Val Leu Tyr Cys Cys Pro Glu Ile Phe Thr Met Arg Gln Gln
 180 185 190
 Asp Ile Asn Asp Thr Val Arg Leu Lys Glu Lys Cys Leu Phe Thr
 195 200 205
 Val Pro Leu His Ala
 210

<210> 5603
 <211> 2070
 <212> DNA
 <213> Homo sapiens

<400> 5603
 ngcttctagg ccttctcagt agatggagct aagtaatata tgtatatata ctaaccacaca
 60
 gatataaata tgtctataat tatttctata tttatccatt cgtgtatatg ttaagataaa
 120
 catgatggag acccttcaaa tttgcttatg ttctttttca gcctatagac cagatataat
 180
 aattagcttt tcttctcttg cagattccag agagtcctct atttcatatg tgccttccag
 240
 aacatctctt gtggtattca ctacttggt tctgtgttca tgggagtcac ccctcatcat
 300
 gtctgcaggc ccccgaggaa tgtgagtcag gttgttttcc ataatcactc taattggagt
 360

ttggaggaca cgggggccct gttgtcttca ggccagaaag attatgttac ggtgcagttg
420
cagaatggtg agatctggga gctctcaagg tgtagcagga ataagagggga gaacacatcg
480
agtttgggct atgaatacac tggcagtaag aaagagtttc cttgtgtgga tggctacata
540
tatgaccaga acacatggaa aagcactgcg gtgaccaggt ggaacctggt ctgtgaccga
600
aaatggcttg caatgctgat ccagccccta tttatgtttg gagtcctact gggatcgggtg
660
acttttggct acttttctga caggctagga cgccgggtgg tcttgtgggc cacaagcagt
720
agcatgtttt tgtttgaat agcagcggcg tttgcagttg attattacac cttcatggct
780
gctcgctttt ttcttgccat ggttgcaagt ggctatcttg tggtaggggtt tgtctatgtg
840
atggaattca ttggcatgaa gtctcggaca tgggcgtctg tccatttgca ttctttttt
900
gcagttggaa ccctgctggt ggctttgaca ggatacttgg tcaggacctg gtggctttac
960
cagatgatcc tctccacagt gactgtcccc tttatcctgt gctgttgggt gctcccagag
1020
acacctttt ggcttctctc agagggacga tatgaagaag cacaaaaaat agttgacatc
1080
atggccaagt ggaacagggc aagctcctgt aaactgtcag aacttttate actggacctt
1140
caaggtcctg ttagtaatag cccactgaa gttcagaagc acaacctatc atatctgttt
1200
tataactgga gcattacgaa aaggacactt accgtttggc taatctgggt cactggaagt
1260
ttgggattct actcgtttct cttgaattct gttaacttag gaggcaatga atacttaaac
1320
ctcttctctc tgggtgtagt ggaaattccc gcctacacct tcgtgtgcat cgccatggac
1380
aaggtcggga ggagaacagt cctggcctac tctcttttct gcagtgcact ggctgtggt
1440
gtcgttatgg tgatccccca gaaacattat attttgggtg tggtagacagc tatggttggg
1500
aaatttgcca tcggggcagc atttggcctc atttatcttt atacagctga gctgtatcca
1560
accattgtaa gatcgctggc tgtgggaagc ggcagcatgg tgtgtcgct ggccagcatc
1620
ctggcgccgt tctctgtgga cctcagcagc atttggatct tcataccaca gttgtttgtt
1680
gggactatgg ccctcctgag tggagtgtta acactaaagc ttccagaaac ccttgggaaa
1740
cggctagcaa ctacttggga ggaggctgca aaactggagt cagagaatga aagcaagtca
1800
agcaaattac ttctcacaac taataatagt gggctggaaa aaacggaagc gattaccccc
1860
agggattctg gtcttgggtg ataaatgtgc catgcctgct gtctagcacc tgaaatatta
1920
tttaccctaa tgcctttgta ttagaggaat cttattctca tctcccatat gttgtttgta
1980

tgtcttttta ataaattttg taagaaaatt ttaaagcaaa tatgttataa aagaaataaa
 2040
 aactaagatg aaaattctca gttttaaaaa
 2070

<210> 5604
 <211> 560
 <212> PRT
 <213> Homo sapiens

<400> 5604
 Arg Phe Gln Arg Val Leu Tyr Phe Ile Cys Ala Phe Gln Asn Ile Ser
 1 5 10 15
 Cys Gly Ile His Tyr Leu Ala Ser Val Phe Met Gly Val Thr Pro His
 20 25 30
 His Val Cys Arg Pro Pro Gly Asn Val Ser Gln Val Val Phe His Asn
 35 40 45
 His Ser Asn Trp Ser Leu Glu Asp Thr Gly Ala Leu Leu Ser Ser Gly
 50 55 60
 Gln Lys Asp Tyr Val Thr Val Gln Leu Gln Asn Gly Glu Ile Trp Glu
 65 70 75 80
 Leu Ser Arg Cys Ser Arg Asn Lys Arg Glu Asn Thr Ser Ser Leu Gly
 85 90 95
 Tyr Glu Tyr Thr Gly Ser Lys Lys Glu Phe Pro Cys Val Asp Gly Tyr
 100 105 110
 Ile Tyr Asp Gln Asn Thr Trp Lys Ser Thr Ala Val Thr Gln Trp Asn
 115 120 125
 Leu Val Cys Asp Arg Lys Trp Leu Ala Met Leu Ile Gln Pro Leu Phe
 130 135 140
 Met Phe Gly Val Leu Leu Gly Ser Val Thr Phe Gly Tyr Phe Ser Asp
 145 150 155 160
 Arg Leu Gly Arg Arg Val Val Leu Trp Ala Thr Ser Ser Ser Met Phe
 165 170 175
 Leu Phe Gly Ile Ala Ala Ala Phe Ala Val Asp Tyr Tyr Thr Phe Met
 180 185 190
 Ala Ala Arg Phe Phe Leu Ala Met Val Ala Ser Gly Tyr Leu Val Val
 195 200 205
 Gly Phe Val Tyr Val Met Glu Phe Ile Gly Met Lys Ser Arg Thr Trp
 210 215 220
 Ala Ser Val His Leu His Ser Phe Phe Ala Val Gly Thr Leu Leu Val
 225 230 235 240
 Ala Leu Thr Gly Tyr Leu Val Arg Thr Trp Trp Leu Tyr Gln Met Ile
 245 250 255
 Leu Ser Thr Val Thr Val Pro Phe Ile Leu Cys Cys Trp Val Leu Pro
 260 265 270
 Glu Thr Pro Phe Trp Leu Leu Ser Glu Gly Arg Tyr Glu Glu Ala Gln
 275 280 285
 Lys Ile Val Asp Ile Met Ala Lys Trp Asn Arg Ala Ser Ser Cys Lys
 290 295 300
 Leu Ser Glu Leu Leu Ser Leu Asp Leu Gln Gly Pro Val Ser Asn Ser
 305 310 315 320
 Pro Thr Glu Val Gln Lys His Asn Leu Ser Tyr Leu Phe Tyr Asn Trp
 325 330 335
 Ser Ile Thr Lys Arg Thr Leu Thr Val Trp Leu Ile Trp Phe Thr Gly

340 345 350
 Ser Leu Gly Phe Tyr Ser Phe Ser Leu Asn Ser Val Asn Leu Gly Gly
 355 360 365
 Asn Glu Tyr Leu Asn Leu Phe Leu Leu Gly Val Val Glu Ile Pro Ala
 370 375 380
 Tyr Thr Phe Val Cys Ile Ala Met Asp Lys Val Gly Arg Arg Thr Val
 385 390 395 400
 Leu Ala Tyr Ser Leu Phe Cys Ser Ala Leu Ala Cys Gly Val Val Met
 405 410 415
 Val Ile Pro Gln Lys His Tyr Ile Leu Gly Val Val Thr Ala Met Val
 420 425 430
 Gly Lys Phe Ala Ile Gly Ala Ala Phe Gly Leu Ile Tyr Leu Tyr Thr
 435 440 445
 Ala Glu Leu Tyr Pro Thr Ile Val Arg Ser Leu Ala Val Gly Ser Gly
 450 455 460
 Ser Met Val Cys Arg Leu Ala Ser Ile Leu Ala Pro Phe Ser Val Asp
 465 470 475 480
 Leu Ser Ser Ile Trp Ile Phe Ile Pro Gln Leu Phe Val Gly Thr Met
 485 490 495
 Ala Leu Leu Ser Gly Val Leu Thr Leu Lys Leu Pro Glu Thr Leu Gly
 500 505 510
 Lys Arg Leu Ala Thr Thr Trp Glu Glu Ala Ala Lys Leu Glu Ser Glu
 515 520 525
 Asn Glu Ser Lys Ser Ser Lys Leu Leu Leu Thr Thr Asn Asn Ser Gly
 530 535 540
 Leu Glu Lys Thr Glu Ala Ile Thr Pro Arg Asp Ser Gly Leu Gly Glu
 545 550 555 560

<210> 5605

<211> 376

<212> DNA

<213> Homo sapiens

<400> 5605

acgcgtgaag gggaactgat gataaacaca aaaggcaatg ttagatggcg ccaggcactg
 60
 cgagggagac aactgggtc ttggggtaga gcgggaagag gtggtagtga cttcttcagt
 120
 catccaggga ggcctctcca gggaggatga cggaacatca gaggaagaa gcaaggagaa
 180
 ccagccacac tcagagctgg gaaagagcag caggaagatg ggggcagtga gtgccagggc
 240
 tctgcaggga tgggcttgcc tggcaggag caataccaag gaagttagta gggcccgggt
 300
 catgccacgg cttgttaggc agaaccctta agtctctttg tagggacccc tttggtctcc
 360
 cctttgaact acgccc
 376

<210> 5606

<211> 101

<212> PRT

<213> Homo sapiens

<400> 5606

```

Met Thr Arg Ala Leu Leu Thr Ser Leu Val Leu Leu Pro Ala Arg Gln
 1             5             10             15
Ala His Pro Cys Arg Ala Leu Ala Leu Thr Ala Pro Ile Phe Leu Leu
      20             25             30
Leu Phe Pro Ser Ser Glu Cys Gly Trp Phe Ser Leu Leu Leu Ser Ser
      35             40             45
Asp Val Pro Ser Ser Ser Leu Glu Arg Pro Pro Trp Met Thr Glu Glu
      50             55             60
Val Thr Thr Thr Ser Ser Arg Ser Thr Pro Arg Pro Ser Val Ser Pro
      65             70             75             80
Ser Gln Cys Leu Ala Pro Ser Asn Ile Ala Phe Cys Val Tyr His Gln
      85             90             95
Phe Pro Phe Thr Arg
      100

```

<210> 5607

<211> 320

<212> DNA

<213> Homo sapiens

<400> 5607

```

gtgcacacgc gaggtatagg ctccagactc ctcaccaaga tgggctatga gtttggcaag
60
ggtttgggcc gacacgcgga aggccgggtg gagcccatcc atgctgtggt gttgcctcga
120
gggaagtcgc tggaccagtg tgtggagacc ctgcagaagc agaccagggt tggcaaggct
180
ggcaccaaca agccccccag gtgccgggga agagggggcca ggccctggggg cgcgccagct
240
cctcggaatg tgtttgactt cctcaatgaa aagctgcaag gtcaggctcc tggggcccta
300
caagccgggc ggccctcagca
320

```

<210> 5608

<211> 106

<212> PRT

<213> Homo sapiens

<400> 5608

```

Val His Thr Arg Gly Ile Gly Ser Arg Leu Leu Thr Lys Met Gly Tyr
 1             5             10             15
Glu Phe Gly Lys Gly Leu Gly Arg His Ala Glu Gly Arg Val Glu Pro
      20             25             30
Ile His Ala Val Val Leu Pro Arg Gly Lys Ser Leu Asp Gln Cys Val
      35             40             45
Glu Thr Leu Gln Lys Gln Thr Arg Val Gly Lys Ala Gly Thr Asn Lys
      50             55             60
Pro Pro Arg Cys Arg Gly Arg Gly Ala Arg Pro Gly Gly Arg Pro Ala
      65             70             75             80
Pro Arg Asn Val Phe Asp Phe Leu Asn Glu Lys Leu Gln Gly Gln Ala
      85             90             95
Pro Gly Ala Leu Gln Ala Gly Arg Pro Gln

```

100

105

<210> 5609
<211> 1843
<212> DNA
<213> Homo sapiens

<400> 5609
tttttttttt tttttttttc aagcaatttt ttccctttat tatttttggt aaataagatt
60
ccagaaagta tagtgcaaac actcagtaga aaagttgcaa ttaagaaatg tacattcaca
120
tttaacattt cagtccattc acttttttta aaataaaaaat aggacaaatt attcaattac
180
ttgtctcaat ttaacaatct tgaaaaagac tggaaggtag cctacagtgt tcagttgaca
240
taaaaataga cccgtattga tcatacaaat ctatcatgag aagttacca gtgagagtga
300
gttattgtaa ttctgaatgt actcatcgtg tttctcactt ctacagaagc atcctcagt
360
agttgtattg tgcgagaaaa tgacaccctt gccacatca ctctccattc catagagggg
420
cacaacccta tctagccaaa ccagaagaa cgcaggcgct tacacaactt ttctcggaca
480
gtcgagaaaa tccaaaagtg ggctttgggc ttaccttaaa taggaatgga atgtaccact
540
acgagatggc catcataata aggacattgt tgtttgagcg gggggtgtgc aatcagtata
600
aatgaggatg gcgagggaag aggagtgggt actgaaggga ggtggtgcat aataagtga
660
cgagctacac aaagctcgag ctacacaaag ctcaggctcc acgggcctcg ccttggtcc
720
cagggatgct ctgcagccag cgggcggatg acctgaggtc gggcctgggc ctgtcccttt
780
gtgcatgcgg cgtgatttca aattcaaact aagtccaca ccattaggag tttcacggc
840
atgcagttcc agagtgcaa tggcttgcac atgtgcagtt ttacagggtg gaaggcaaga
900
ccatacatct ctcccacact gggcgtgcct cctagtggac agttgtatgc aagaggcgg
960
gatgggctcc ctccagatcc cccaatgtgg gaatgggtccc ctgagacttg tgcttcgtgt
1020
gcctggggcc cagagttggg tggggggttg ctggtgggag gtgagaaaca agttctggct
1080
gccgtcgggc cagcttccca ctgccctcac ctgggaggtg gatgccaca ggcaggatgc
1140
tctgggctac tgttgacacag tcctgcacga gatatttatt cagcccaca gatttaata
1200
atctcttggg agttcatcta ggctattatg tctgtttaaa cattaattct caataagtgc
1260
ctgaaagctc ttttgaaagc aacctatttg aaggtctgaa ccgcccggtc ccagcaggaa
1320
ccaatgccca ggagagggtc agagcacatg tgctctgggt gttgtcaaat ctctcaccat
1380

ccatcataag ccctctgaac tcctgctgaa atcggccctt tgaacatcct ctaaccctcg
1440
ggaaggcacc cggacccacc ttacctcac cagcagcata tgacaataac attaaatggc
1500
tctacagcag aggaagatga aagtaaaagt agcaaataca accaatggcc ttcccatagc
1560
tcacagaact cctgagcaga agctgagcag ggaagaaatg gtgtgtagtt tcagggtgtc
1620
tggaggtgcc accattttctc cccatttgat gtcagagagg ctttacaaaa aaataaggca
1680
acagctctta aggagattct gtatatattga aattagacgc aatgacaggt ttcgctccca
1740
aantatagtt ttagaatata gtctgatatg acaaagtagg gatttttaaa gcctaacatt
1800
ttatttcctt gctggggatc agttagtaaa gaaggaggaa ttc
1843

<210> 5610

<211> 153

<212> PRT

<213> Homo sapiens

<400> 5610

Met	Arg	Arg	Asp	Phe	Lys	Phe	Lys	Leu	Ser	Ser	Thr	Pro	Leu	Gly	Val
1				5					10					15	
Phe	Thr	Ala	Cys	Ser	Ser	Arg	Val	Gln	Met	Ala	Cys	Ile	Cys	Ala	Val
			20					25					30		
Phe	Thr	Gly	Gly	Arg	Gln	Asp	His	Thr	Ser	Leu	Pro	His	Trp	Ala	Cys
		35				40					45				
Leu	Leu	Val	Asp	Ser	Cys	Met	Gln	Glu	Ala	Val	Met	Gly	Ser	Leu	Arg
	50				55					60					
Ile	Pro	Gln	Cys	Gly	Asn	Gly	Pro	Leu	Arg	Leu	Val	Leu	Arg	Val	Pro
65				70					75					80	
Gly	Ala	Gln	Ser	Trp	Val	Gly	Gly	Cys	Trp	Trp	Glu	Val	Arg	Asn	Lys
			85					90					95		
Phe	Trp	Leu	Pro	Ser	Gly	Gln	Leu	Pro	Thr	Ala	Leu	Thr	Trp	Glu	Val
			100					105					110		
Asp	Ala	His	Arg	Gln	Asp	Ala	Leu	Gly	Tyr	Cys	Cys	Thr	Val	Leu	His
		115				120						125			
Glu	Ile	Phe	Ile	Gln	Pro	Thr	Arg	Phe	Asn	Arg	Ser	Leu	Gly	Ser	Ser
	130					135					140				
Ser	Arg	Leu	Leu	Cys	Leu	Phe	Lys	His							
145					150										

<210> 5611

<211> 1152

<212> DNA

<213> Homo sapiens

<400> 5611

ngggccgctc cctcccgac tcccgccctc ccggcctccc tggccccgcc tgggaaggga
60
tgcaaggaag ccctccggcg ctgcgctccg aggcgggaga cagcgctccc ctccgccct
120

cgggtcctgg cgcctcagag cccggcccag gccgcggaac ggtgatgctc gggccggacg
 180
 ggcgagcgcg gatccctgcg tcccgtgaa aatgtgtgtc tgacatgcaa gctcagtggtg
 240
 gcagagaccc gtggattgct gtgccctgcc ctccggacct ggatcatgaa ggtgttggga
 300
 agaagcttct tctgggtgct gtttcccgct cttccctggg cggcgcaggc tgtggagcac
 360
 gaggaggtgg cgcagcgtgt gatcaaaactg caccgcgggc gaggggtggc tgccatgcag
 420
 agccggcagt ggggtccggga cagctgcagg aagctctcag ggcttctccg ccagaagaat
 480
 gcagttctga acaaactgaa aactgcaatt ggagcagtggt agaaagacgt gggcctgtcg
 540
 gatgaagaga aactgtttca ggtgcacacg tttgaaattt tccagaaaga gctgaatgaa
 600
 agtgaataatt ccgttttcca agctgtctac ggactgcaga gagccctgca gggggattac
 660
 aaagatgtcg tgaacatgaa ggagagcagc cggcagcgcc tggaggccct gagagaggct
 720
 gcaataaagg aagaaacaga atatatggaa cttctggcag cagaaaaaca tcaagttgaa
 780
 gcccttaaaa atatgcaaca tcaaaaccaa agtttatcca tgcttgacga gattcttgaa
 840
 gatgtaagaa aggcagcggg tegtctggag gaagagatag aggaacatgc ttttgacgac
 900
 aataaatcag tcaagggggg caattttgag gcagttctga ggggtggagga agaagaggcc
 960
 aattctaagc aaaatataac aaaacgagaa gtggaggatg acttggttct tagcatgctg
 1020
 attgactccc agaacaacca gtatatatttg accaagccca gagattcaac catcccacgt
 1080
 gcagatcacc actttataaa ggacattgtt accataggaa tgctgtcttt gccttgtggc
 1140
 tggcgatgta ca
 1152

<210> 5612

<211> 289

<212> PRT

<213> Homo sapiens

<400> 5612

Met	Lys	Val	Leu	Gly	Arg	Ser	Phe	Phe	Trp	Val	Leu	Phe	Pro	Val	Leu
1				5					10					15	
Pro	Trp	Ala	Val	Gln	Ala	Val	Glu	His	Glu	Glu	Val	Ala	Gln	Arg	Val
			20					25					30		
Ile	Lys	Leu	His	Arg	Gly	Arg	Gly	Val	Ala	Ala	Met	Gln	Ser	Arg	Gln
			35				40					45			
Trp	Val	Arg	Asp	Ser	Cys	Arg	Lys	Leu	Ser	Gly	Leu	Leu	Arg	Gln	Lys
	50					55					60				
Asn	Ala	Val	Leu	Asn	Lys	Lys	Lys	Thr	Ala	Ile	Gly	Ala	Val	Glu	Lys
				70						75				80	
Asp	Val	Gly	Leu	Ser	Asp	Glu	Glu	Lys	Leu	Phe	Gln	Val	His	Thr	Phe

tcagattatg ctgctgcca gttacgccag tatcatcggt tgaccaagca gatcaaacct
 660
 gacatggaaa catatgagag actgagagaa aaacatggag aagagttttt cccaacatcc
 720
 aatagtcttc ttcattggaac acatgtgcct tccacagagg aaattgacag gatggtcata
 780
 gatctggaaa aacagattga aaaacgagac aaatatagcc ggagacgtcc ttataatgat
 840
 gatgcagata tcgactacat taatgaaagg aatgccaaat tcaacaagaa agctgaaaga
 900
 ttctatggga aatacacagc tgaaattaaa cagaatttgg aaagaggaaac agctgtctaa
 960
 tcccttcaag aactgtttat agaagcttga gaatggggta aaaatttctg ctagcaaaat
 1020
 caagttcttt ttgaaatttt atcagtaatc cagaatttag tagtccatgc cttctcactc
 1080
 agcattttag aataaaaatg tggtttctta aacgtatatc ctttcatgta tatttccaca
 1140
 tttttgtgct tggatataag atgtatttct tgtagtgaag ttgttttgta atctactttg
 1200
 tatacattct aattatatta tttttctatg tattttaaat gtatatggct gtttaatctt
 1260
 tgaagcattt tgggcttaag attgccagca gcacacatca gatgcagtca ttgttgctat
 1320
 cagtgtggaa tttgatagag tctagactcg ggccacttgg agttgtgtac tccaaagcta
 1380
 aggacagtga tgaggaagat ggcagtggcc accggaggac tggagcagtc cctcctcatg
 1440
 gcggcctgtg accaaggctg gggaggagtg gagctatcct tccatgatct gatcatgtac
 1500
 ttcggagaga ggctggagtg tgctaccgac gtcgaatata catgcagtcg gttagaggct
 1560
 ggagtgtgct accgacgtcg aatatccatg cagactagaa aaccattat ctcagcccaa
 1620
 aatctcctta agctgataag caacttcagc aaagtctcag catacaaaat caatgtaca
 1679

<210> 5614

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5614

Ser	Gln	Phe	Ser	Leu	Ser	Gln	Val	Leu	Val	Asp	Ser	Ala	Glu	Glu	Gly
1				5					10					15	
Ser	Leu	Ala	Ala	Ala	Ala	Glu	Leu	Ala	Ala	Gln	Lys	Arg	Glu	Gln	Arg
			20						25					30	
Leu	Arg	Lys	Phe	Arg	Glu	Leu	His	Leu	Met	Arg	Asn	Glu	Ala	Arg	Lys
			35				40					45			
Leu	Asn	His	Gln	Glu	Val	Val	Glu	Glu	Asp	Lys	Arg	Leu	Lys	Leu	Pro
			50			55					60				
Ala	Asn	Trp	Glu	Ala	Lys	Lys	Ala	Arg	Leu	Glu	Trp	Glu	Leu	Lys	Glu
65					70					75					80
Glu	Glu	Lys	Lys	Lys	Glu	Cys	Ala	Ala	Arg	Gly	Glu	Asp	Tyr	Glu	Lys


```

<400> 5615
ccggctgtat tatctggcta tttcaaacag tttcagaagt ctttacctcc acgattccag
60
cggcagcagg aacagatgaa acagcagcag tggcagcagc agcaacagca aggtgtactt
120
ccacagactg ttccttcaca accgtccagt agtactgtcc ctccctccacc acacagacct
180
ctttatcagc ctatgcagcc tcatcctcag catttggtt ctatgggtt tgatccaagg
240
tggtcatga tgcagtccta catggatcct cgaatgatgt caggaagacc tgctatggat
300
attccacca ttcatcctgg aatgattcct cctaaaccat taatgagaag agaccagatg
360
gaagggtcac cgaacagttc tgagtcattt gagcatatag ctcgatctgc aagagatcac
420
gcaatttccc tttctgagcc tcgtatgctg tgggggtcag atccctatcc tcatgctgag
480
cctcaacaag caactactcc caaagcaaca gaagagcctg aggatgtaag gtctgaagct
540
gcgttggacc aggaacagat tactgctgct tattctgtag aacataatca attagaggct
600
cacccaaagg cagactttat cagagaatca agtgaggcac aagtacaaa gtttttaage
660
agatctgtgg aagatgttag acctcaccat actgatgcaa ataatcagtc tgcttgtttt
720
gaagcacctg atcaaaagac cttatccact cctcaagagg agcggatttc agctgtagaa
780

```

agtcagcctt cccgaaaaag aagtgtttcc catggatcta accatacgca aaaaccagac
 840
 gagcagagaa gtgaaccatc tgcaggcatt cctaaagtaa ccagcagatg cattgattca
 900
 aaagaaccaa tagaaaggcc agaggagaaa ccaaaaaagg aaggctttat acgatcttct
 960
 gaaggaccaa aacctgaaaa agtatataaa tctaaatcag aaactcgttg gggcccacga
 1020
 ccaagctcta acagaaggga agaagttaat gatagacctg tgagaagatc aggtcccatt
 1080
 aaaaaacctg tacttagaga tatgaaagag gaacgggaac agaggaagga gaaagaagga
 1140
 gaaaaggccg aaaaggtcac tgaaaaagta gttgtaaagc ctgaaaagac ggaaaagaag
 1200
 gatcttcctc ctccccacc accacctcag ccaccagcac caattcagcc acagtcagtt
 1260
 ccaccaccaa ttcaaccaga agcagagaaa tttccttcaa cagaaactgc aactttggct
 1320
 caaaaacat ctcaggatac tgagaagcct ctggaacctg tgagtactgt tcaggtagag
 1380
 cctgcagtta agactgtaaa ccaacagact atggcagcac cagtagtcaa agaaaaagaa
 1440
 ctacaaaaga aagaaagaaa gcaagaaaaa gaaaaagaac tagaacggca gaaagaaaag
 1500
 gaaaaagaac tacaaaaaaa aa
 1522

<210> 5616

<211> 507

<212> PRT

<213> Homo sapiens

<400> 5616

Pro	Ala	Val	Leu	Ser	Gly	Tyr	Phe	Lys	Gln	Phe	Gln	Lys	Ser	Leu	Pro
1				5					10					15	
Pro	Arg	Phe	Gln	Arg	Gln	Gln	Glu	Gln	Met	Lys	Gln	Gln	Gln	Trp	Gln
			20					25					30		
Gln	Gln	Gln	Gln	Gln	Gly	Val	Leu	Pro	Gln	Thr	Val	Pro	Ser	Gln	Pro
		35				40						45			
Ser	Ser	Ser	Thr	Val	Pro	Pro	Pro	Pro	His	Arg	Pro	Leu	Tyr	Gln	Pro
	50					55				60					
Met	Gln	Pro	His	Pro	Gln	His	Leu	Ala	Ser	Met	Gly	Phe	Asp	Pro	Arg
65					70				75					80	
Trp	Leu	Met	Met	Gln	Ser	Tyr	Met	Asp	Pro	Arg	Met	Met	Ser	Gly	Arg
			85					90						95	
Pro	Ala	Met	Asp	Ile	Pro	Pro	Ile	His	Pro	Gly	Met	Ile	Pro	Pro	Lys
			100					105					110		
Pro	Leu	Met	Arg	Arg	Asp	Gln	Met	Glu	Gly	Ser	Pro	Asn	Ser	Ser	Glu
		115				120						125			
Ser	Phe	Glu	His	Ile	Ala	Arg	Ser	Ala	Arg	Asp	His	Ala	Ile	Ser	Leu
	130					135					140				
Ser	Glu	Pro	Arg	Met	Leu	Trp	Gly	Ser	Asp	Pro	Tyr	Pro	His	Ala	Glu
145				150					155					160	
Pro	Gln	Gln	Ala	Thr	Thr	Pro	Lys	Ala	Thr	Glu	Glu	Pro	Glu	Asp	Val

```

      165      170      175
Arg Ser Glu Ala Ala Leu Asp Gln Glu Gln Ile Thr Ala Ala Tyr Ser
      180      185      190
Val Glu His Asn Gln Leu Glu Ala His Pro Lys Ala Asp Phe Ile Arg
      195      200      205
Glu Ser Ser Glu Ala Gln Val Gln Lys Phe Leu Ser Arg Ser Val Glu
      210      215      220
Asp Val Arg Pro His His Thr Asp Ala Asn Asn Gln Ser Ala Cys Phe
      225      230      235
Glu Ala Pro Asp Gln Lys Thr Leu Ser Thr Pro Gln Glu Glu Arg Ile
      245      250      255
Ser Ala Val Glu Ser Gln Pro Ser Arg Lys Arg Ser Val Ser His Gly
      260      265      270
Ser Asn His Thr Gln Lys Pro Asp Glu Gln Arg Ser Glu Pro Ser Ala
      275      280      285
Gly Ile Pro Lys Val Thr Ser Arg Cys Ile Asp Ser Lys Glu Pro Ile
      290      295      300
Glu Arg Pro Glu Glu Lys Pro Lys Lys Glu Gly Phe Ile Arg Ser Ser
      305      310      315
Glu Gly Pro Lys Pro Glu Lys Val Tyr Lys Ser Lys Ser Glu Thr Arg
      325      330      335
Trp Gly Pro Arg Pro Ser Ser Asn Arg Arg Glu Glu Val Asn Asp Arg
      340      345      350
Pro Val Arg Arg Ser Gly Pro Ile Lys Lys Pro Val Leu Arg Asp Met
      355      360      365
Lys Glu Glu Arg Glu Gln Arg Lys Glu Lys Glu Gly Glu Lys Ala Glu
      370      375      380
Lys Val Thr Glu Lys Val Val Val Lys Pro Glu Lys Thr Glu Lys Lys
      385      390      395
Asp Leu Pro Pro Pro Pro Pro Pro Gln Pro Pro Ala Pro Ile Gln
      405      410      415
Pro Gln Ser Val Pro Pro Pro Ile Gln Pro Glu Ala Glu Lys Phe Pro
      420      425      430
Ser Thr Glu Thr Ala Thr Leu Ala Gln Lys Pro Ser Gln Asp Thr Glu
      435      440      445
Lys Pro Leu Glu Pro Val Ser Thr Val Gln Val Glu Pro Ala Val Lys
      450      455      460
Thr Val Asn Gln Gln Thr Met Ala Ala Pro Val Val Lys Glu Lys Glu
      465      470      475
Leu Gln Lys Lys Glu Arg Lys Gln Glu Lys Glu Lys Glu Leu Glu Arg
      485      490      495
Gln Lys Glu Lys Glu Lys Glu Leu Gln Lys Lys
      500      505

```

<210> 5617

<211> 3480

<212> DNA

<213> Homo sapiens

<400> 5617

```

nactcaagct gaatgcttta ttgtaatctc ccaaatacctg tggatagcgc ttaaagatta
60
aataagtttt cgtaggttat actatcattt ttttttctga cttttagaaa aaaaatgatac
120

```

atttacttga ttttttttaa gttgtatttt taatttgaga ggatttcaca tgaactgtaa
180
tgtttggtt ttcagccagt gcacaaagac tctattagcc ttttcatggc acatgttcac
240
accactgtaa atgaaatgag taccagatat taccagaatg agagaagaca caactatacc
300
accccaaaga gttttctaga acaaatatca ctgtttaaga acctgttgaa gaagaagcaa
360
aatgaggtat ccgagaaaaa agaacgcctg gtgaacggca tccaaaagct aaaaaccaca
420
gcctctcagg tgggagatct aaaagccaga cttgcctctc aagaagccga gctgcaactg
480
agaaatcatg atgccgaagc tctgatcaca aagatcggcc ttcagacgga gaaagtgagc
540
cgggaaaaga ccatcgctga tgctgaggag cgaaaggtga cagccattca gactgaagtg
600
ttccagaaac agagagaatg tgaagctgac ttactcaagg ctgagcctgc actggtggct
660
gctacagctg cactcaatac actcaacagg gtcaacctca gtgagctgaa agcctttccc
720
aacctccca tcgcagttac caatgttact gcagccgtga tggtccttct ggctcctcgg
780
ggaagagtgc ccaaagaccg aagttggaaa gcagctaaag tcttcatggg aaaggttgat
840
gattttttgc aagcattaat taactatgac aaagagcaca ttccagagaa ctgtctaaaa
900
gtggtgaatg aacactattt gaaagacca gagtttaatc caaacctgat tcgaaccaa
960
tcttttgag cagctggcct gtgtgcctgg gtcatcaaca tcattaaatt ctatgaggtc
1020
tactgtgatg tggagccaaa acgccaagca ttagcccaag caaacttaga actggctgca
1080
gctactgaaa aactagaggc tatcaggaaa aagcttgtgg tgagtgcaaa ctatgacatt
1140
gaaaagtcag agaagattcg ctgggggtcaa tccattaagt cctttgaagc tcaagagaag
1200
acactctgtg gagatgttct tctcacggcg gcatttgtgt cttacgtcgg acccttcaca
1260
aggcagtatc gccaggagct ggtgcactgc aagtgggttc cctttcttca acagaaggtt
1320
tccattccac taaccgaagg cctggacttg atatccatgt tgacggatga tgctacaatt
1380
gccgcctgga ataacgaagg actgcccagt gacagaatgt ccaccgaaaa tgcgcctatc
1440
ctaacacact gtgagcgctg gcctctggtg atagatcccc agcaacaggg aattaagtg
1500
atcaagaata agtatggaat ggacctgaaa gtcacacatt tgggccagaa agggtttttg
1560
aatgccattg aaactgcttt ggcctttggt gatgtcatct taattgaaaa tctcgaggaa
1620
acgatagatc cagtctgga tccactactt ggcaggaaca caattaaaaa aggaaagtat
1680
atcaggattg gagataaaga atgtgaattt aacaagaact ttcgccttat ccttcacaca
1740

aaattggcaa atcctcacta taagccggaa ttacaagctc agacaactct cctcaatttc
1800
acagtcacag aagatggtct agaagcccag ctgctggcag aggttgctag tattgaaagg
1860
ccagatttgg agaaaactta gttggtattg acaaagcacc aaaatgattt taaaattgag
1920
ctcaagtatc tggagacga tctccttttg cgcctttctg cggcagaggg aagctttctg
1980
gatgacacca aactggtaga gagattggag gcaacaaaga ccaccgtggc agagatagag
2040
cacaaggtga ttgaagccaa agaaaatgaa agaaaaatca acgaggcccg agaattgtac
2100
agaccagtgg cagcaagagc atctcttctt tattttgtta ttaatgacct ccaaaaaatc
2160
aaccctctct accaattctc tttgaaggct ttttaacgtgc tgttccacag agcgatcgag
2220
caggctgaca aggtggaaga catgcaggga cgcattctta tcctgatgga gagcatcacc
2280
catgctgtct tcctctacac cagccaggcg ctgtttgaga aggacaagct caccttcttg
2340
tcccagatgg cttttcagat tttgttgaga aagaaagaga tagaccctct tgaattggat
2400
ttcctgcttc gattcacagt tgaacacact catctgagtc ccgttgactt cctaacttct
2460
cagtcatgga gtgctatcaa ggcaattgcc gtcattggaag aatttcgagg catagaccga
2520
gatgtggaag gatctgcaa gcagtggagg aagtgggtag aatccgagtg tccagaaaaa
2580
gaaaaattac ctcaagaatg gaagaagaaa agtttaatac agaagctgat tcttctgaga
2640
gcaatgcgcc ctgacagaat gacgtatgct ctcaaaaatt ttgtagagga aaaactgggt
2700
gcgaagtatg tggagaggac cagattggac ttagttaaag cattcgaaga aagcagccca
2760
gccaccccca tattcttcat cctgtctccg ggggtagatg cccttaaaga cctggagatt
2820
cttggcaaaa gacttggctt tacaattgac tctggaaaat tccacaatgt gtctttagga
2880
caaggtcagg agacggtggc agaagtggcc ctggagaaag cttccaaagg aggacactgg
2940
gtcatcctcc aaaatgttca tttggtagcc aagtggctag gaaccttga gaagctcctt
3000
gaaagattca gccaaaggaag ccacagagat tacagggttt tcatgagtgc tgagtctgca
3060
cctacaccag atgagcatat catccctcaa ggactcctgg aaaattccat taagatcact
3120
aatgaacccc caacagggat gctggccaat ttgcatgccg ccctgtacaa ctttgatcag
3180
gtaagaaagc gaagcaggct aggcagacaa tgaagtcaga gtcattctac aagactgtgg
3240
ggcccagaat caaccaggc atgtcattga gagggatgaa gcaagttctt aatgttcgca
3300
tgtggaaggg taggggtggg cgtgttttaa tctcttgaaa gaattgcccc tgtcatttcc
3360

gatttctaag accagtaaat atattttcagt ctcaccctaa cattaagaaa acttcagcta
 3420
 ctgtgtaggg aaagctaact aggttaacttc ttgaggaggt tgcttttttt tttttttttt
 3480

<210> 5618

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 5618

His	Lys	Asp	Ser	Ile	Ser	Leu	Phe	Met	Ala	His	Val	His	Thr	Thr	Val
1				5					10					15	
Asn	Glu	Met	Ser	Thr	Arg	Tyr	Tyr	Gln	Asn	Glu	Arg	Arg	His	Asn	Tyr
			20					25					30		
Thr	Thr	Pro	Lys	Ser	Phe	Leu	Glu	Gln	Ile	Ser	Leu	Phe	Lys	Asn	Leu
		35				40					45				
Leu	Lys	Lys	Lys	Gln	Asn	Glu	Val	Ser	Glu	Lys	Lys	Glu	Arg	Leu	Val
50					55					60					
Asn	Gly	Ile	Gln	Lys	Leu	Lys	Thr	Thr	Ala	Ser	Gln	Val	Gly	Asp	Leu
65				70					75					80	
Lys	Ala	Arg	Leu	Ala	Ser	Gln	Glu	Ala	Glu	Leu	Gln	Leu	Arg	Asn	His
			85					90						95	
Asp	Ala	Glu	Ala	Leu	Ile	Thr	Lys	Ile	Gly	Leu	Gln	Thr	Glu	Lys	Val
		100					105					110			
Ser	Arg	Glu	Lys	Thr	Ile	Ala	Asp	Ala	Glu	Glu	Arg	Lys	Val	Thr	Ala
	115					120						125			
Ile	Gln	Thr	Glu	Val	Phe	Gln	Lys	Gln	Arg	Glu	Cys	Glu	Ala	Asp	Leu
130					135						140				
Leu	Lys	Ala	Glu	Pro	Ala	Leu	Val	Ala	Ala	Thr	Ala	Ala	Leu	Asn	Thr
145				150					155					160	
Leu	Asn	Arg	Val	Asn	Leu	Ser	Glu	Leu	Lys	Ala	Phe	Pro	Asn	Pro	Pro
			165					170						175	
Ile	Ala	Val	Thr	Asn	Val	Thr	Ala	Ala	Val	Met	Val	Leu	Leu	Ala	Pro
	180						185					190			
Arg	Gly	Arg	Val	Pro	Lys	Asp	Arg	Ser	Trp	Lys	Ala	Ala	Lys	Val	Phe
	195					200					205				
Met	Gly	Lys	Val	Asp	Asp	Phe	Leu	Gln	Ala	Leu	Ile	Asn	Tyr	Asp	Lys
210					215						220				
Glu	His	Ile	Pro	Glu	Asn	Cys	Leu	Lys	Val	Val	Asn	Glu	His	Tyr	Leu
225					230					235				240	
Lys	Asp	Pro	Glu	Phe	Asn	Pro	Asn	Leu	Ile	Arg	Thr	Lys	Ser	Phe	Ala
			245					250						255	
Ala	Ala	Gly	Leu	Cys	Ala	Trp	Val	Ile	Asn	Ile	Ile	Lys	Phe	Tyr	Glu
		260					265						270		
Val	Tyr	Cys	Asp	Val	Glu	Pro	Lys	Arg	Gln	Ala	Leu	Ala	Gln	Ala	Asn
	275						280					285			
Leu	Glu	Leu	Ala	Ala	Ala	Thr	Glu	Lys	Leu	Glu	Ala	Ile	Arg	Lys	Lys
290						295					300				
Leu	Val	Val	Ser	Ala	Asn	Tyr	Asp	Ile	Glu	Lys	Ser	Glu	Lys	Ile	Arg
305					310					315				320	
Trp	Gly	Gln	Ser	Ile	Lys	Ser	Phe	Glu	Ala	Gln	Glu	Lys	Thr	Leu	Cys
			325					330						335	
Gly	Asp	Val	Leu	Leu	Thr	Ala	Ala	Phe	Val	Ser	Tyr	Val	Gly	Pro	Phe

[illegible]

770						775						780					
Trp	Val	Glu	Ser	Glu	Cys	Pro	Glu	Lys	Glu	Lys	Leu	Pro	Gln	Glu	Trp		
785						790				795					800		
Lys	Lys	Lys	Ser	Leu	Ile	Gln	Lys	Leu	Ile	Leu	Leu	Arg	Ala	Met	Arg		
										810					815		
Pro	Asp	Arg	Met	Thr	Tyr	Ala	Leu	Arg	Asn	Phe	Val	Glu	Glu	Lys	Leu		
			820					825					830				
Gly	Ala	Lys	Tyr	Val	Glu	Arg	Thr	Arg	Leu	Asp	Leu	Val	Lys	Ala	Phe		
		835					840					845					
Glu	Glu	Ser	Ser	Pro	Ala	Thr	Pro	Ile	Phe	Phe	Ile	Leu	Ser	Pro	Gly		
	850					855					860						
Val	Asp	Ala	Leu	Lys	Asp	Leu	Glu	Ile	Leu	Gly	Lys	Arg	Leu	Gly	Phe		
865					870					875					880		
Thr	Ile	Asp	Ser	Gly	Lys	Phe	His	Asn	Val	Ser	Leu	Gly	Gln	Gly	Gln		
				885				890						895			
Glu	Thr	Val	Ala	Glu	Val	Ala	Leu	Glu	Lys	Ala	Ser	Lys	Gly	Gly	His		
		900						905					910				
Trp	Val	Ile	Leu	Gln	Asn	Val	His	Leu	Val	Ala	Lys	Trp	Leu	Gly	Thr		
	915					920						925					
Leu	Glu	Lys	Leu	Leu	Glu	Arg	Phe	Ser	Gln	Gly	Ser	His	Arg	Asp	Tyr		
	930					935					940						
Arg	Val	Phe	Met	Ser	Ala	Glu	Ser	Ala	Pro	Thr	Pro	Asp	Glu	His	Ile		
945					950					955					960		
Ile	Pro	Gln	Gly	Leu	Leu	Glu	Asn	Ser	Ile	Lys	Ile	Thr	Asn	Glu	Pro		
			965					970						975			
Pro	Thr	Gly	Met	Leu	Ala	Asn	Leu	His	Ala	Ala	Leu	Tyr	Asn	Phe	Asp		
		980					985						990				
Gln	Val	Arg	Lys	Arg	Ser	Arg	Leu	Gly	Arg	Gln							
	995						1000										

<210> 5619

<211> 1219

<212> DNA

<213> Homo sapiens

<400> 5619

aagccggaga gctggagctt tgaagccacc ccggtcaaag gatgctgagt ccggagcgcc
60
tagccctacc ggactacgag tatctggctc agcgacatgt cctcacctac atggaggatg
120
cagtgtgcca gctgctagaa aacaggggaag atattagcca atatggaatt gccaggttct
180
tcaactgaata ttttaacagt gtatgccagg gaacacacat tctctttcga gaattcagct
240
tcgtccaagc caccctccac aataggggtat cattttttacg ggccttctgg agatgcttcc
300
gaactgtggg caaaaatggc gatttgctga ccatgaaaga atatcactgt ttgctgcaat
360
tactgtgtcc tgatttcccg ctggagctca ctgagaaagc agccaggatt gtgctcatgg
420
acgatgccat ggactgcttg atgtcttttt cagatttcct ctttgccttc cagatccagt
480
tttactactc agaattcctg gacagtgtgg ctgccatcta tgaggacctg ctgtcaggca
540

agaaccccaa cacagtgatt gtgccgacgt cgtccagtgg gcagcaccgc caacgacctg
 600
 ccttggggcgg ggccggcacg ctggaggcgg tggaggcgtc gctgttctac cagtgtctgg
 660
 aaaacctgtg tgatcggcac aagtacagct gcccaccccc agcacttgtc aaagaggccc
 720
 tcagcaatgt tcagagactg accttctatg gattcctcat ggctctctca aagcaccgtg
 780
 gaatcaacca agccctcggg aagtcagagc taagcagccg tcagcctctc ctgccgcaca
 840
 acacagggag cagctggcct ctgttagcaa cacggctcca gaggggaagg ggcattacca
 900
 tctctgcctt gacttcccag ggccggactc aatcccaggg agcaggaata tggcgacaaa
 960
 acatggctct tacacattcc catggtaggg gacagccctc cctgcttgca gccctgcccc
 1020
 aacatgaaac cacctcccca tagcagaagc gccagcccc tctcagaga acccagctc
 1080
 tgctttgggg agcagcctgc aggtcgggca gacacaggac tatttactca gtgacgctag
 1140
 agattatata tcagagagac ctgaatccca ttataaaca aggcaaaggt gtgtctgcgg
 1200
 agaccttttt tccaagctg
 1219

<210> 5620

<211> 333

<212> PRT

<213> Homo sapiens

<400> 5620

Met	Leu	Ser	Pro	Glu	Arg	Leu	Ala	Leu	Pro	Asp	Tyr	Glu	Tyr	Leu	Ala
1				5				10						15	
Gln	Arg	His	Val	Leu	Thr	Tyr	Met	Glu	Asp	Ala	Val	Cys	Gln	Leu	Leu
			20					25					30		
Glu	Asn	Arg	Glu	Asp	Ile	Ser	Gln	Tyr	Gly	Ile	Ala	Arg	Phe	Phe	Thr
			35				40						45		
Glu	Tyr	Phe	Asn	Ser	Val	Cys	Gln	Gly	Thr	His	Ile	Leu	Phe	Arg	Glu
	50					55					60				
Phe	Ser	Phe	Val	Gln	Ala	Thr	Pro	His	Asn	Arg	Val	Ser	Phe	Leu	Arg
65					70					75				80	
Ala	Phe	Trp	Arg	Cys	Phe	Arg	Thr	Val	Gly	Lys	Asn	Gly	Asp	Leu	Leu
			85					90						95	
Thr	Met	Lys	Glu	Tyr	His	Cys	Leu	Leu	Gln	Leu	Leu	Cys	Pro	Asp	Phe
			100					105					110		
Pro	Leu	Glu	Leu	Thr	Gln	Lys	Ala	Ala	Arg	Ile	Val	Leu	Met	Asp	Asp
			115				120					125			
Ala	Met	Asp	Cys	Leu	Met	Ser	Phe	Ser	Asp	Phe	Leu	Phe	Ala	Phe	Gln
	130						135					140			
Ile	Gln	Phe	Tyr	Tyr	Ser	Glu	Phe	Leu	Asp	Ser	Val	Ala	Ala	Ile	Tyr
145					150					155				160	
Glu	Asp	Leu	Leu	Ser	Gly	Lys	Asn	Pro	Asn	Thr	Val	Ile	Val	Pro	Thr
			165					170						175	
Ser	Ser	Ser	Gly	Gln	His	Arg	Gln	Arg	Pro	Ala	Leu	Gly	Gly	Ala	Gly

```

                180                185                190
Thr Leu Glu Gly Val Glu Ala Ser Leu Phe Tyr Gln Cys Leu Glu Asn
                195                200                205
Leu Cys Asp Arg His Lys Tyr Ser Cys Pro Pro Pro Ala Leu Val Lys
                210                215                220
Glu Ala Leu Ser Asn Val Gln Arg Leu Thr Phe Tyr Gly Phe Leu Met
225                230                235                240
Ala Leu Ser Lys His Arg Gly Ile Asn Gln Ala Leu Gly Lys Ser Glu
                245                250                255
Leu Ser Ser Arg Gln Pro Leu Leu Pro His Asn Thr Gly Ser Ser Trp
                260                265                270
Pro Leu Leu Ala Thr Arg Leu Gln Arg Gly Arg Gly Ile Thr Ile Ser
                275                280                285
Ala Leu Thr Ser Gln Gly Arg Thr Gln Ser Gln Gly Ala Gly Ile Trp
                290                295                300
Arg Gln Asn Met Ala Leu Thr His Ser His Gly Arg Gly Gln Pro Ser
305                310                315                320
Leu Pro Ala Ala Leu Pro Gln His Glu Thr Thr Ser Pro
                325                330

```

<210> 5621
 <211> 456
 <212> DNA
 <213> Homo sapiens

```

<400> 5621
tttttgtgaa atagaattta ttgtggctct gattatgtac acgtgagatg gcctggctgg
60
gccggccggg ctcacatggt ttgtacaata aatacatctg tggggcgggc tctccgcagc
120
cgggaagggc caccgccacg gttcagtcca gcttcggggc tcccagcttc atggggccct
180
tggccacctt cctctcgggc cgtttggcct ccattctccc cgcgcgtcc tcgcgttct
240
tccgggcccag ctcagccttg acctgtcctg ggtgctggga cgtgcagaca gggtagcgaa
300
ggggctcgccc ttgtcgctgg actctggggc accccagtta tactcgctgg ccagccgtgt
360
accgtcagga ggtggctcct gggagcttgg ctgaaccgt ggcggtggcc cttcccggt
420
gcggagagcc cgccccacag atgtatttat tgtaca
456

```

<210> 5622
 <211> 82
 <212> PRT
 <213> Homo sapiens

```

<400> 5622
Met Ala Trp Leu Gly Arg Pro Gly Ser His Gly Leu Tyr Asn Lys Tyr
1         5         10         15
Ile Cys Gly Ala Gly Ser Pro Gln Pro Gly Arg Ala Thr Ala Thr Val
20        25        30
Gln Ser Ser Phe Arg Ala Pro Ser Phe Met Gly Pro Leu Ala Thr Phe

```

35 40 45
 Leu Ser Ala Arg Leu Ala Ser Ile Ser Arg Arg Arg Ser Ser Arg Phe
 50 55 60
 Phe Arg Ala Ser Ser Ala Leu Thr Cys Pro Gly Cys Trp Asp Val Gln
 65 70 75 80
 Thr Gly

<210> 5623
 <211> 357
 <212> DNA
 <213> Homo sapiens

<400> 5623
 nctggaagaa ctcgtcatgc tctttgtagc gtggtgcttc tgttgctcac aggacaactt
 60
 gcctttgatg attttcaaga gagttgtgct atgatgtggc aaaagtatgc aggaagcagg
 120
 cggatcaatgc ctctgggagc aaggatcctt ttccacggtg tgttctatgc cgggggcttt
 180
 gccattgtgt attacctcat tcaaaagttt cattccaggg ctttatatta caagttggca
 240
 gtggagcagc tgcagagcca tcccaggga caggaagctc tgggccctcc tctcaacatc
 300
 cattatctca agctcatcga cagggaaaac ttcgtggaca ttgttgatgc caagttg
 357

<210> 5624
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 5624
 Met Trp Gln Lys Tyr Ala Gly Ser Arg Arg Ser Met Pro Leu Gly Ala
 1 5 10 15
 Arg Ile Leu Phe His Gly Val Phe Tyr Ala Gly Gly Phe Ala Ile Val
 20 25 30
 Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg Ala Leu Tyr Tyr Lys Leu
 35 40 45
 Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly
 50 55 60
 Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe
 65 70 75 80
 Val Asp Ile Val Asp Ala Lys Leu
 85

<210> 5625
 <211> 1017
 <212> DNA
 <213> Homo sapiens

<400> 5625
 gccgaactcgt ggtacctggc gcttctgggc ttcgtgagc acttccgcac ttccagcccg
 60

cccaaaatcc gcctgtgctg gactgcctg caggccgtgt tccccttcaa gccgccgag
 120
 cgcacgagg cccgtacaca cctgcagctg ggctccgttc tctatcacca caccaagaac
 180
 agcgcagcagg cgcgcagcca cctggagaag gcgtgggtga tatcacagca aatcccacag
 240
 ttcgaagatg ttaaatttga agcagcaagt ctgttgtctg aattgtactg tcaagagaat
 300
 tccgttgatg cagcaaagcc gctgctgcgg aaggcgatcc agatctcaca gcagacccca
 360
 tattggcact gccgcctgct cttccagctc gctcaactgc acacgcttga gaaggacctg
 420
 gtgtcggcct gtgacctcct ggggttaggg gccgagtacg cccgggtggg gggatctgaa
 480
 tacacacggg cgctgttctt cctcagcaag gggatgctgc tgctgatgga gcgaaagctg
 540
 caggaggtgc acccgctgct gacctctgc gggcagatcg tggagaactg gcaggggaac
 600
 cccatccaga aggagtcgct gcgtgtcttc ttcttggtgc tccaggtcac ccactatctg
 660
 gatgccgggc aggtgaagag cgtgaagccg tgtctgaagc agctgcagca gtgcatccag
 720
 accatctcca cactgcacga tgatgagatc ctgcccagca accccgctga cctcttccac
 780
 tggctgcccaggagcacat gtgtgtgctt gtctacctgg tgactgtgat gcactccatg
 840
 caggccggct acctggagaa ggcgcagaag tacacggaca aggccctcat gcagctggag
 900
 aagctcaaga tgctggactg cagccccatc ctgtcatcct tccaagtgat cctgctggag
 960
 cacatcatca tgtgccgcct tgtcacgggt cacaaggcca cggcgctgca ggagatc
 1017

<210> 5626

<211> 339

<212> PRT

<213> Homo sapiens

<400> 5626

Ala	Asp	Ser	Trp	Tyr	Leu	Ala	Leu	Leu	Gly	Phe	Ala	Glu	His	Phe	Arg
1				5					10					15	
Thr	Ser	Ser	Pro	Pro	Lys	Ile	Arg	Leu	Cys	Val	His	Cys	Leu	Gln	Ala
			20					25					30		
Val	Phe	Pro	Phe	Lys	Pro	Pro	Gln	Arg	Ile	Glu	Ala	Arg	Thr	His	Leu
			35				40					45			
Gln	Leu	Gly	Ser	Val	Leu	Tyr	His	His	Thr	Lys	Asn	Ser	Glu	Gln	Ala
			50			55					60				
Arg	Ser	His	Leu	Glu	Lys	Ala	Trp	Leu	Ile	Ser	Gln	Gln	Ile	Pro	Gln
65					70				75					80	
Phe	Glu	Asp	Val	Lys	Phe	Glu	Ala	Ala	Ser	Leu	Leu	Ser	Glu	Leu	Tyr
				85				90					95		
Cys	Gln	Glu	Asn	Ser	Val	Asp	Ala	Ala	Lys	Pro	Leu	Leu	Arg	Lys	Ala
			100					105					110		
Ile	Gln	Ile	Ser	Gln	Gln	Thr	Pro	Tyr	Trp	His	Cys	Arg	Leu	Leu	Phe

115 120 125
 Gln Leu Ala Gln Leu His Thr Leu Glu Lys Asp Leu Val Ser Ala Cys
 130 135 140
 Asp Leu Leu Gly Val Gly Ala Glu Tyr Ala Arg Val Val Gly Ser Glu
 145 150 155 160
 Tyr Thr Arg Ala Leu Phe Leu Leu Ser Lys Gly Met Leu Leu Leu Met
 165 170 175
 Glu Arg Lys Leu Gln Glu Val His Pro Leu Leu Thr Leu Cys Gly Gln
 180 185 190
 Ile Val Glu Asn Trp Gln Gly Asn Pro Ile Gln Lys Glu Ser Leu Arg
 195 200 205
 Val Phe Phe Leu Val Leu Gln Val Thr His Tyr Leu Asp Ala Gly Gln
 210 215 220
 Val Lys Ser Val Lys Pro Cys Leu Lys Gln Leu Gln Gln Cys Ile Gln
 225 230 235 240
 Thr Ile Ser Thr Leu His Asp Asp Glu Ile Leu Pro Ser Asn Pro Ala
 245 250 255
 Asp Leu Phe His Trp Leu Pro Lys Glu His Met Cys Val Leu Val Tyr
 260 265 270
 Leu Val Thr Val Met His Ser Met Gln Ala Gly Tyr Leu Glu Lys Ala
 275 280 285
 Gln Lys Tyr Thr Asp Lys Ala Leu Met Gln Leu Glu Lys Leu Lys Met
 290 295 300
 Leu Asp Cys Ser Pro Ile Leu Ser Ser Phe Gln Val Ile Leu Leu Glu
 305 310 315 320
 His Ile Ile Met Cys Arg Leu Val Thr Gly His Lys Ala Thr Ala Leu
 325 330 335
 Gln Glu Ile

<210> 5627

<211> 1401

<212> DNA

<213> Homo sapiens

<400> 5627

nctctcacac tgtggaattc tctctatcag cctcaaagtc cagatttgga aagggagtct
 60
 cagcgagggg cagcagctgg cccaacccgg aggcagagcg gcaactgaac tctagccgga
 120
 aagagccagg gttatgtgca catgggaggt ggggaggaca ggggctgtat gtgacctca
 180
 catctgttcc tcgcgcccc gatggcttct gctgcctgct ccatggacct catcgacgc
 240
 tttgagctcc tggatctcct gtttgaccgg caggacggca tcttgagaca cgtggagctg
 300
 ggcgaggggt ggggtcacgt caaggaccag gtcttgccaa acccggactc tgacgacttc
 360
 ctcagctcca tcttgggctc tggagactca ctgcccagct cccactctg gtccccgaa
 420
 ggcagtata gtggcatctc cgaagacctc ccctccgacc ccaggacac ccctccacgc
 480
 agcggaccag ccacctcccc cgccggctgc catctgccc agcctggcaa ggggcctgc
 540

ctctcctatc atcctggcaa ctcttgctcc accacaaccc cagggccagt gatccaacaa
 600
 cagcatcacc tgggggcctc ctacctcctg cgacctgggg ctgggcactg tcaggagctg
 660
 gtgctcaccg aggatgagaa gaagctgctg gctaaagaag gcatcacctt gccactcag
 720
 ctgccccctca ctaagtacga ggagcgagtg ctgaaaaaaaa tccgccggaa aatccggaac
 780
 aagcagtcgg cgcaagaaag caggaagaag aagaaggaat atatcgatgg cctggagact
 840
 cggctcctgtt gctgtccttt gccctcatca tcctcccctc catcagccct tttggcccca
 900
 acaaaaccga gagccctggg gactttgcgc ctgtacgagt gttctccaga actttgcaca
 960
 acgatgctgc ctcccgcgtg gctgctgatg ctgtgccagg ctccgaggcc ccaggacccc
 1020
 gacccgaggc tgacacaacc cgagaagagt ctccaggaag ccccggggca gactggggct
 1080
 tccaggacac cgcaaacctg accaattcga cggaggagct ggacaacgcc accctggtcc
 1140
 tgaggaatgc aacagagggg ctgggccagg tcgccctgct ggactgggtg ggcctggggc
 1200
 cgagcactgg ctcaggacgt gcagggctgg agggggcggg agacgagctg tgagccccac
 1260
 caggactatg ctcccaggcc cctctgccca ggggtgcctt ggggatgctg cactgggacg
 1320
 ctaccacctt ggggatggga cgtgaggcca agaccccagc agagatgcca gaatggggga
 1380
 ggcacagctc atagccacac a
 1401

<210> 5628

<211> 299

<212> PRT

<213> Homo sapiens

<400> 5628

Met	Ala	Ser	Ala	Ala	Cys	Ser	Met	Asp	Pro	Ile	Asp	Ser	Phe	Glu	Leu
1				5					10					15	
Leu	Asp	Leu	Leu	Phe	Asp	Arg	Gln	Asp	Gly	Ile	Leu	Arg	His	Val	Glu
			20					25					30		
Leu	Gly	Glu	Gly	Trp	Gly	His	Val	Lys	Asp	Gln	Val	Leu	Pro	Asn	Pro
			35				40					45			
Asp	Ser	Asp	Asp	Phe	Leu	Ser	Ser	Ile	Leu	Gly	Ser	Gly	Asp	Ser	Leu
		50				55					60				
Pro	Ser	Ser	Pro	Leu	Trp	Ser	Pro	Glu	Gly	Ser	Asp	Ser	Gly	Ile	Ser
65					70					75					80
Glu	Asp	Leu	Pro	Ser	Asp	Pro	Gln	Asp	Thr	Pro	Pro	Arg	Ser	Gly	Pro
				85				90						95	
Ala	Thr	Ser	Pro	Ala	Gly	Cys	His	Pro	Ala	Gln	Pro	Gly	Lys	Gly	Pro
			100					105					110		
Cys	Leu	Ser	Tyr	His	Pro	Gly	Asn	Ser	Cys	Ser	Thr	Thr	Thr	Pro	Gly
			115				120					125			
Pro	Val	Ile	Gln	Gln	Gln	His	His	Leu	Gly	Ala	Ser	Tyr	Leu	Leu	Arg

```

      130              135              140
Pro Gly Ala Gly His Cys Gln Glu Leu Val Leu Thr Glu Asp Glu Lys
145              150              155              160
Lys Leu Leu Ala Lys Glu Gly Ile Thr Leu Pro Thr Gln Leu Pro Leu
      165              170              175
Thr Lys Tyr Glu Glu Arg Val Leu Lys Lys Ile Arg Arg Lys Ile Arg
      180              185              190
Asn Lys Gln Ser Ala Gln Glu Ser Arg Lys Lys Lys Lys Glu Tyr Ile
      195              200              205
Asp Gly Leu Glu Thr Arg Ser Cys Cys Cys Pro Leu Pro Ser Ser Ser
      210              215              220
Ser Pro Pro Ser Ala Leu Leu Ala Pro Thr Lys Pro Arg Ala Leu Gly
225              230              235              240
Thr Leu Arg Leu Tyr Glu Cys Ser Pro Glu Leu Cys Thr Thr Met Leu
      245              250              255
Pro Pro Ala Trp Leu Leu Met Leu Cys Gln Ala Pro Arg Pro Gln Asp
      260              265              270
Pro Asp Pro Arg Leu Thr Gln Pro Glu Lys Ser Leu Gln Glu Ala Pro
      275              280              285
Gly Gln Thr Gly Ala Ser Arg Thr Pro Arg Thr
      290              295

```

<210> 5629

<211> 428

<212> DNA

<213> Homo sapiens

<400> 5629

```

gtgcacgacc ccaactgaatc atcccacaac catggatggg agacacactc agtctccttt
60
aacagaagat aaagctgggg cttacagaga atgtacaact tggcccaggg cacaccagtt
120
agccatcagg ggcagngctg ctattcaggt ctgggactgt gggactccag agcccatgtt
180
ttttacgagg atgccatact gccacaatgg atggtgtctt tatctcctga tatatgattg
240
tgtgttggga ggcgtggggg ggcagctgga agaattggaga ggcataattg tggaggatct
300
tccccattc tctgtaccc tctcttgag ctcccagttc catctgagaa attatctact
360
ctgagaaatc gtcacaacac agcatggttg tgagtgcagt ggcagaagcc tgtgcctggt
420
tgtatggg
428

```

<210> 5630

<211> 110

<212> PRT

<213> Homo sapiens

<400> 5630

```

Met Asp Gly Arg His Thr Gln Ser Pro Leu Thr Glu Asp Lys Ala Gly
1              5              10              15
Ala Tyr Arg Glu Cys Thr Thr Trp Pro Arg Ala His Gln Leu Ala Ile

```

<400> 5632
Met Gly Val Pro Trp Ala Trp Arg Arg Gln Gln Glu Gly Val Thr Gly

1 5 10 15
 Ala Gly Ala Gly Ala Gly His Leu Thr Pro Gln Ala Ser Pro Thr Ser
 20 25 30
 Glu Leu Pro Thr Ala Lys Thr Pro Gly Glu Ala Gly Arg Gly Gly Val
 35 40 45
 Arg Gly Lys Glu Gly Leu Cys Glu Ser Lys Pro His Pro Gln Ser Arg
 50 55 60
 Ala Glu Thr Gln Val Cys Lys Ser His Pro Pro Pro Thr Ser Ser Ser
 65 70 75 80
 Phe Glu Ala Ser Ser Thr Arg Gly Arg Ala Gly Ala Ala Gln Arg Pro
 85 90 95
 Glu Lys Gly Lys Pro His Arg Arg Lys Leu Lys Ala Ser Val Pro Cys
 100 105 110
 Val Ser Ala Glu Arg Val Asn Gly Pro Lys Gly Ser Ser Leu Gln Thr
 115 120 125
 Ala Arg Ile His Pro Thr Gly Gly His Arg Thr Arg Pro Gly Pro Ser
 130 135 140
 Ala Ser Val Pro Val Gln Pro Thr Pro Val Gln Pro Gly Ala Leu Ser
 145 150 155 160
 Asp Leu Thr Thr Arg Val Pro Ser Thr Cys Val His Thr Gln Met Gln
 165 170 175
 Glu Arg Thr His Thr Thr Val
 180

<210> 5633

<211> 2181

<212> DNA

<213> Homo sapiens

<400> 5633

gccaatgtcc ctgtggccac tcagctgaga ccgagggcga cctgggcagc tgcgggtgtc
 60
 tgtcacctcc gtgtcccaca tagatgccag gctctgcttc tgtggttctg gaggtcatta
 120
 gtcaattgta tgtggtgctg tctgtcctcc tgattgcaga ggaggaagga accccttaaa
 180
 tgagcgggtt ctgagtgtg gggccgtggt tctgctctgc ctggtgggat tctccagtgc
 240
 tggcttcac tgtgccccag cccactctc accaacaagg agggcgtgaa aatgacaagg
 300
 aatccatccc tagagttcac aggagatcta gggcagagtt tccaagctgc agctgctctg
 360
 gccctgtgtg agctgctgct ctgaggaagc cccaggctga ggtagctacc aggcggaggc
 420
 tgggtttgga ggctccaca tcaggaatt gagcggtagg ggtttcagcc ttcacgttgg
 480
 tcgcgcact gtatgggaag tggggtctg ggtctgcttg cccagtctca ccgtcctctt
 540
 cctccccaaa gccgcctgga taaggggctg gccgcactgg tgcgggagcg tggcgaggat
 600
 ctggtgtgta tcgagggcat gggcgtgct gtccacacaa actaccacgc agccctgcgc
 660
 tgcgagagcc tcaagctggc cgtcatcaag aacgcgtggc tggccgagcg gctggggcgc
 720

cggtcttca ggcctatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc
780
ggactcttct gcttgtcact tgtccgagtg gcttcagaga ttaaaggggc cccctcataa
840
atgtgcctta attttcgcag ataacagggg gaatagacat ctttttggga gtcttcccct
900
ttgtcagggg gctactcctt agagggacag aggtcatcct ggctgcaac tcaggccccg
960
ccctgaacga cgtgaccac agcgagtcct tcctcgtggc agagcgtatt gcgggcatgg
1020
accctgaccg tgccgagcct gctggacacc agggagcact gtctgaacga gttcaacttc
1080
ccggatccct actccaaagt gaagcagcgg gagaatggcg tggcgctgag gtgcttcccc
1140
ggggtcgtgc gctccctgga cgcgtggggc tgggaggaac ggcagctggc gctggtgaaa
1200
ggcctcctgg cggggaatgt cttcgactgg ggggcaaaag ccgtgtctgc tgccttgaa
1260
tccgaccctt actttgggtt tgaagaagca aagaggaagt tacaagaaag accctggctc
1320
gtggattcct acagcgagtg gcttcagaga ttaaaggggc cccctcataa atgtgcctta
1380
attttcgcag ataacagtgg aatagacatc attttgggag tcttcccctt tgtcagggag
1440
ctactcctta gagggacaga ggtcatcctg gcgtgcaact caggccccgc cctgaacgac
1500
gtgaccacga gcgagtcctt catcgtggca gagcgtattg cgggcatgga ccctgtcgtg
1560
cactctgcgc tccaggaaga gaggtgctg ctggtgcaga cgggctccag cttcccgctg
1620
ctcgacctca gccgcctgga taaggggctg gccgcactgg tgcgggagcg tggcgaggat
1680
ctgggtggtc tcgagggcat gggccgtgct gtccacacaa actaccacgc agccctgcgc
1740
tgcgagagcc tcaagctggc cgtcatcaag aacgcgtggc tggccgagcg gctggggcgg
1800
cggtcttca gcgtcatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc
1860
ggactcttct gcttgtcact tgtcaggaat gtgtttttac caccacaggg aaactgcgtt
1920
caaatacaac tatttatatg gtactgctgt gacgcggcac atacaccca gccgcacaga
1980
tgcgtgtgac ccagaggcga gacgcagctt tgcctggga gacgttcata ttggaatcta
2040
tttaactgct aaagaacctt ttatatatat atatatatat aaatagagag atctatacag
2100
gtatgtctga cgggacgcag caccgtgggc acgcacaaa tagagttttt aaaagaggaa
2160
aaaaaactct atttggtgcg t
2181

<210> 5634

<211> 289

<212> PRT

<213> Homo sapiens

<400> 5634

```

Pro Thr Ala Ser Pro Ser Ser Trp Gln Ser Val Leu Arg Ala Trp Thr
 1           5           10           15
Leu Thr Val Arg Ser Leu Leu Asp Thr Arg Glu His Cys Leu Asn Glu
 20           25           30
Phe Asn Phe Pro Asp Pro Tyr Ser Lys Val Lys Gln Arg Glu Asn Gly
 35           40           45
Val Ala Leu Arg Cys Phe Pro Gly Val Val Arg Ser Leu Asp Ala Leu
 50           55           60
Gly Trp Glu Glu Arg Gln Leu Ala Leu Val Lys Gly Leu Leu Ala Gly
 65           70           75           80
Asn Val Phe Asp Trp Gly Ala Lys Ala Val Ser Ala Val Leu Glu Ser
 85           90           95
Asp Pro Tyr Phe Gly Phe Glu Glu Ala Lys Arg Lys Leu Gln Glu Arg
 100          105          110
Pro Trp Leu Val Asp Ser Tyr Ser Glu Trp Leu Gln Arg Leu Lys Gly
 115          120          125
Pro Pro His Lys Cys Ala Leu Ile Phe Ala Asp Asn Ser Gly Ile Asp
 130          135          140
Ile Ile Leu Gly Val Phe Pro Phe Val Arg Glu Leu Leu Leu Arg Gly
 145          150          155          160
Thr Glu Val Ile Leu Ala Cys Asn Ser Gly Pro Ala Leu Asn Asp Val
 165          170          175
Thr His Ser Glu Ser Leu Ile Val Ala Glu Arg Ile Ala Gly Met Asp
 180          185          190
Pro Val Val His Ser Ala Leu Gln Glu Glu Arg Leu Leu Leu Val Gln
 195          200          205
Thr Gly Ser Ser Ser Pro Cys Leu Asp Leu Ser Arg Leu Asp Lys Gly
 210          215          220
Leu Ala Ala Leu Val Arg Glu Arg Gly Ala Asp Leu Val Val Ile Glu
 225          230          235          240
Gly Met Gly Arg Ala Val His Thr Asn Tyr His Ala Ala Leu Arg Cys
 245          250          255
Glu Ser Leu Lys Leu Ala Val Ile Lys Asn Ala Trp Leu Ala Glu Arg
 260          265          270
Leu Gly Gly Arg Leu Phe Ser Val Ile Phe Lys Tyr Glu Val Pro Ala
 275          280          285
Glu

```

<210> 5635

<211> 614

<212> DNA

<213> Homo sapiens

<400> 5635

```

nntgtgaaag atgttgcaga agtgttccag aagtggctga agatagaagg aaaaaagtgc
60
cactgcctat cagaaaaaac aaaacaaaac atgggaaata caaccaccaa attccgtaaa
120
gcactcatca atggtgatga aaacctggcc tgccaaatat atgaaaacaa tcctcagcta
180

```

aaagaatctc ttgatccaaa tacatcttat ggggagccct accagcacia tactccatta
 240
 cattatgctg ctagacatgg aatgaataaa atattaggag atgatttcag aagagcagat
 300
 tgtctgcaga tgatcttaaa atggaaagga gcaaaacttg accaggggtga atatgagaga
 360
 gcagctattg atgctgttga taacaaaaaa aacacaccct tgcactatgc tgctgcctca
 420
 gggatgaaag cctgtgtaga aaaacatgga ggagacttgt ttgctgagaa tgaaaataaa
 480
 gatactcctt gtgattgtgc tgaaaagcaa caccacaaag atttggccct caatctggaa
 540
 tctcaaattg tattctcacg ggatcccgag gctgaagaaa tagaagctga atatgctgca
 600
 ttagacaaac gaga
 614

<210> 5636

<211> 204

<212> PRT

<213> Homo sapiens

<400> 5636

Xaa	Val	Lys	Asp	Val	Ala	Glu	Val	Phe	Gln	Lys	Trp	Leu	Lys	Ile	Glu
1				5					10					15	
Gly	Lys	Lys	Cys	His	Cys	Leu	Ser	Glu	Lys	Thr	Lys	Gln	Asn	Met	Gly
			20					25					30		
Asn	Thr	Thr	Thr	Lys	Phe	Arg	Lys	Ala	Leu	Ile	Asn	Gly	Asp	Glu	Asn
	35					40					45				
Leu	Ala	Cys	Gln	Ile	Tyr	Glu	Asn	Asn	Pro	Gln	Leu	Lys	Glu	Ser	Leu
	50					55				60					
Asp	Pro	Asn	Thr	Ser	Tyr	Gly	Glu	Pro	Tyr	Gln	His	Asn	Thr	Pro	Leu
65					70				75					80	
His	Tyr	Ala	Ala	Arg	His	Gly	Met	Asn	Lys	Ile	Leu	Gly	Asp	Asp	Phe
			85					90					95		
Arg	Arg	Ala	Asp	Cys	Leu	Gln	Met	Ile	Leu	Lys	Trp	Lys	Gly	Ala	Lys
		100					105					110			
Leu	Asp	Gln	Gly	Glu	Tyr	Glu	Arg	Ala	Ala	Ile	Asp	Ala	Val	Asp	Asn
	115					120					125				
Lys	Lys	Asn	Thr	Pro	Leu	His	Tyr	Ala	Ala	Ala	Ser	Gly	Met	Lys	Ala
	130					135					140				
Cys	Val	Glu	Lys	His	Gly	Gly	Asp	Leu	Phe	Ala	Glu	Asn	Glu	Asn	Lys
145				150					155					160	
Asp	Thr	Pro	Cys	Asp	Cys	Ala	Glu	Lys	Gln	His	His	Lys	Asp	Leu	Ala
			165					170					175		
Leu	Asn	Leu	Glu	Ser	Gln	Met	Val	Phe	Ser	Arg	Asp	Pro	Glu	Ala	Glu
		180					185						190		
Glu	Ile	Glu	Ala	Glu	Tyr	Ala	Ala	Leu	Asp	Lys	Arg				
	195						200								

<210> 5637

<211> 825

<212> DNA

<213> Homo sapiens

<400> 5637
acgcgtccga ggctcctcaa acccagggcc ccacctggca cgtggaggaa gaagagaagg
60
gcaggaggca ggtgcccagg tgggagcccc ctctgtgccc cctgggagtg tccccccgcg
120
ccaggtactc agggccctgc cctcgtggcc ttgtccgctc gccgcgggtg gggctggcac
180
aaggcccggt ttggaggaag tggaggctcc caggagaaag gcagtggctg tgatcgaca
240
gcccaggctc tgccctgcac tgccctggac cacgaggctg cccaccccag acaggtggga
300
cccccttccc gcatgcagac tctgagcagc agcttctgtg gacccccacc gcgtcctgct
360
cctcaggctc atgccctgcy ggaacagaag ccaagaccg gtagaaaatc caaggtgttt
420
aaatataaat aagagcgatt cccacagccc cacggtgctg gccagcctca caggtgcccg
480
ctggttctgt gacccatccc aggcacacgc tcccctggct gggcgcttg ccagggtcc
540
cctgtggctg gcgtgtggag acacgtgggc ccttctccac gtgcccacga gggccgtagc
600
aggctccaag gaggccagc cccggccagc ctgtgtggac cccgcgggcc tgcgcgcccc
660
ggagctgctg actgtgtcag agcccggctg cccagcgccc cggcgccctc cctccagctg
720
cccagcctgg gatccgtccg ctgtctgtct cctgaaccag ggagtctgac ccactcacag
780
ctcccatggg gtccgtgcag ccaaggcccc gcagccacac tcaact
825

<210> 5638
<211> 132
<212> PRT
<213> Homo sapiens

<400> 5638
Met Pro Cys Gly Asn Arg Ser Gln Asp Pro Val Glu Asn Pro Arg Cys
1 5 10 15
Leu Asn Ile Asn Lys Ser Asp Ser His Ser Pro Thr Val Leu Ala Ser
20 25 30
Leu Thr Gly Ala Arg Trp Phe Cys Asp Pro Ser Gln Ala His Ala Pro
35 40 45
Leu Ala Gly Arg Leu Ala Arg Ala Pro Leu Trp Leu Ala Cys Gly Asp
50 55 60
Thr Trp Ala Leu Leu His Val Pro Thr Arg Ala Val Ala Gly Ser Lys
65 70 75 80
Glu Ala Gln Pro Arg Pro Ala Cys Val Asp Pro Ala Gly Leu Arg Ala
85 90 95
Pro Glu Leu Leu Thr Val Ser Glu Pro Gly Cys Pro Ala Pro Arg Arg
100 105 110
Pro Pro Ser Ser Cys Pro Ala Trp Asp Pro Ser Ala Val Cys Leu Leu
115 120 125
Asn Gln Gly Val

130

<210> 5639

<211> 2433

<212> DNA

<213> Homo sapiens

<400> 5639

natagctaca aaataaaaaa aactaattca aacaaatgta cttatttaaat ccaatatatc
60
ccaacaatta ttgcagcaca taatcaatat aaacattata tatatgaact atttgacact
120
atttgacatt tcttcttcca catccagtgt atctgacatt tagcgccacat ttgatttgca
180
ctcaccact ttgaggagct caattgccgc ttaagtccgt ggctagtggc tgccctaaag
240
ttcagcaccg ccacggagct ttgggtccac ccggactgta aaaaggaagc acttccgtta
300
gcatgaccg gcctgaagta gcggcggaac ggaagtcgct tgtgtatgaa cgcagcggcg
360
gacctgtgag gggatccgac ttgccggcag aacttacgct gcgggacccc gggcactgtt
420
gctgctgcgg gagactgtgg gctgtttagt gccatgcacc ctttacagtg tgcctccaa
480
gtgcagaggt ctctggggtg gggaccattg gcctctgtgt cttggctgtc gctgaggatg
540
tgcagggcac acagcagtct ctctagtacc atgtgtccca gtccagagag gcaggaggat
600
ggagctcggg aggatttcag ctccaggctg gctgctggac cgacttttca acatttttta
660
aaaagtgcct cagctcctca ggagaagctg tcttcagaag tggaagaccc acctccctat
720
ctcatgatgg atgaacttct tggaaggcag agaaaagtct acctcgagac ctatggctgc
780
cagatgaatg tgaatgacac agagatagcc tgggccatct tacagaagag tggctacctg
840
cgccagtaa cctccaaggc agatgtgatt ctcttgtca cgtgctctat cagggagaag
900
gctgagcaga ccatctggaa ccgtttacat cagcttaaag ccttgaagac aaggcggccc
960
cgctcccggg ttcctctgag gattggaatt ctaggctgca tggctgagag gttgaaggag
1020
gagattctca acagagagaa aatggtagat attttggtg gtcctgatgc ctaccgggac
1080
cttccccggc tgctggctgt tgctgagtcg ggccagcaag ctgccaacgt gctgctctct
1140
ctggacgaga cctatgctga tgtcatgcca gtccagacaa gcgccagtgc cacgtctgcc
1200
tttgtgtcaa tcatgcgagg ctgtgacaac atgtgtagct actgcattgt tcctttcacc
1260
cggggcaggg agaggagtcg gcctattgcc tccattctag aggaagtga gaagctttct
1320
gagcaggggc tgaaagaagt gacacttctt ggtcagaatg ttaatagttt tcgggacaat
1380

tcggagggtcc agttcaacag tgcagtgccct accaatctca gtcgtggcctt taccaccaac
 1440
 tataaaacca agcaaggagg acttcgtttt gtcctcttc tggatcaggt ctccagagta
 1500
 gatcctgaaa tgaggatccg ttttacctct cccacccca aggattttcc tgatgagggt
 1560
 ctgcagctga ttcagtagag agataacatc tgtaaacaga tccacctgcc agcccagagt
 1620
 ggaagcagcc gtgtgttgga ggccatgcgg aggggatatt caagagaagc ttatgtggag
 1680
 ttagttcacc atattagaga atctattcca ggtgtgagcc tcagcagcga tttcattgct
 1740
 ggcttttgtg gtgagacgga ggaagatcac gtccagacag tctctttgct ccgggaagtt
 1800
 cagtacaaca tgggcttcct ctttgcctac agcatgagac agaagacacg ggcatatcat
 1860
 aggctgaagg atgatgtccc ggaagaggta aaattaaggc gtttgaggga actcatcact
 1920
 atcttccgag aagaagcaac aaaagccaat cagacctctg tgggctgtac ccagttggtg
 1980
 ctagtggaag ggctcagtaa acgctctgcc actgacctgt gtggcaggaa tgatggaaac
 2040
 cttaagtgga tcttccctga tgcagagatg gaggatgtca ataaccctgg gctcagggtc
 2100
 agagcccagc ctggggacta tgtgctgggtg aagatcacn ntcagccagt tctcagacac
 2160
 ttaggggaca tgttctctgc aggaccactc tgagggactc ttctgcatat tgctgacctg
 2220
 agaggatggc ctccagagctg acttgggcaa tcctcccaa caggaagggg agacattgcc
 2280
 tgccactgag gaaacaggtc atgaagggtg agataagctg caaggggcca agcaacttta
 2340
 tgtcagtgga aaacgtgtct ctttaaagct gctatgtgaa cagcttttac agtcattaaa
 2400
 tttacctaaa ctaagggttaa aaaaaaaaaa aaa
 2433

<210> 5640

<211> 540

<212> PRT

<213> Homo sapiens

<400> 5640

Met Cys Pro Ser Pro Glu Arg Gln Glu Asp Gly Ala Arg Lys Asp Phe
 1 5 10 15
 Ser Ser Arg Leu Ala Ala Gly Pro Thr Phe Gln His Phe Leu Lys Ser
 20 25 30
 Ala Ser Ala Pro Gln Glu Lys Leu Ser Ser Glu Val Glu Asp Pro Pro
 35 40 45
 Pro Tyr Leu Met Met Asp Glu Leu Leu Gly Arg Gln Arg Lys Val Tyr
 50 55 60
 Leu Glu Thr Tyr Gly Cys Gln Met Asn Val Asn Asp Thr Glu Ile Ala
 65 70 75 80
 Trp Ser Ile Leu Gln Lys Ser Gly Tyr Leu Arg Pro Val Thr Ser Lys

```

      85              90              95
Ala Asp Val Ile Leu Leu Val Thr Cys Ser Ile Arg Glu Lys Ala Glu
      100              105              110
Gln Thr Ile Trp Asn Arg Leu His Gln Leu Lys Ala Leu Lys Thr Arg
      115              120              125
Arg Pro Arg Ser Arg Val Pro Leu Arg Ile Gly Ile Leu Gly Cys Met
      130              135              140
Ala Glu Arg Leu Lys Glu Glu Ile Leu Asn Arg Glu Lys Met Val Asp
      145              150              155              160
Ile Leu Ala Gly Pro Asp Ala Tyr Arg Asp Leu Pro Arg Leu Leu Ala
      165              170              175
Val Ala Glu Ser Gly Gln Gln Ala Ala Asn Val Leu Leu Ser Leu Asp
      180              185              190
Glu Thr Tyr Ala Asp Val Met Pro Val Gln Thr Ser Ala Ser Ala Thr
      195              200              205
Ser Ala Phe Val Ser Ile Met Arg Gly Cys Asp Asn Met Cys Ser Tyr
      210              215              220
Cys Ile Val Pro Phe Thr Arg Gly Arg Glu Arg Ser Arg Pro Ile Ala
      225              230              235              240
Ser Ile Leu Glu Glu Val Lys Lys Leu Ser Glu Gln Gly Leu Lys Glu
      245              250              255
Val Thr Leu Leu Gly Gln Asn Val Asn Ser Phe Arg Asp Asn Ser Glu
      260              265              270
Val Gln Phe Asn Ser Ala Val Pro Thr Asn Leu Ser Arg Gly Phe Thr
      275              280              285
Thr Asn Tyr Lys Thr Lys Gln Gly Gly Leu Arg Phe Ala His Leu Leu
      290              295              300
Asp Gln Val Ser Arg Val Asp Pro Glu Met Arg Ile Arg Phe Thr Ser
      305              310              315              320
Pro His Pro Lys Asp Phe Pro Asp Glu Val Leu Gln Leu Ile His Glu
      325              330              335
Arg Asp Asn Ile Cys Lys Gln Ile His Leu Pro Ala Gln Ser Gly Ser
      340              345              350
Ser Arg Val Leu Glu Ala Met Arg Arg Gly Tyr Ser Arg Glu Ala Tyr
      355              360              365
Val Glu Leu Val His His Ile Arg Glu Ser Ile Pro Gly Val Ser Leu
      370              375              380
Ser Ser Asp Phe Ile Ala Gly Phe Cys Gly Glu Thr Glu Glu Asp His
      385              390              395              400
Val Gln Thr Val Ser Leu Leu Arg Glu Val Gln Tyr Asn Met Gly Phe
      405              410              415
Leu Phe Ala Tyr Ser Met Arg Gln Lys Thr Arg Ala Tyr His Arg Leu
      420              425              430
Lys Asp Asp Val Pro Glu Glu Val Lys Leu Arg Arg Leu Glu Glu Leu
      435              440              445
Ile Thr Ile Phe Arg Glu Glu Ala Thr Lys Ala Asn Gln Thr Ser Val
      450              455              460
Gly Cys Thr Gln Leu Val Leu Val Glu Gly Leu Ser Lys Arg Ser Ala
      465              470              475              480
Thr Asp Leu Cys Gly Arg Asn Asp Gly Asn Leu Lys Val Ile Phe Pro
      485              490              495
Asp Ala Glu Met Glu Asp Val Asn Asn Pro Gly Leu Arg Val Arg Ala
      500              505              510
Gln Pro Gly Asp Tyr Val Leu Val Lys Ile Thr Xaa Gln Pro Val Leu

```


515 520 525

Arg His Leu Gly Asp Met Phe Ser Ala Gly Pro Leu

530 535 540

<210> 5641

<211> 293

<212> DNA

<213> Homo sapiens

<400> 5641

gcgtcgcata cagccaacct gtgcgtgctg ctgtaccgca gcggcggtcaa agtgggtcacc

60

ttctgtggcc acgcgtccaa aaccaatcag gtcaactcgg gcggtgtgct gctgagggttg

120

caggtgggcg aggaggtgtg gctggctggg gcacccctgg catccctgga gagccaggtg

180

aggagggcag atacaagcag aaattccagt cagtgttcac ggtcactcgg cagacccacc

240

agccccctgc acccaacagc ctgatcagat tcaacgcggg cctcaccaac ccg

293

<210> 5642

<211> 87

<212> PRT

<213> Homo sapiens

<400> 5642

Ala Ser His Thr Ala Asn Leu Cys Val Leu Leu Tyr Arg Ser Gly Val

1 5 10 15

Lys Val Val Thr Phe Cys Gly His Ala Ser Lys Thr Asn Gln Val Asn

20 25 30

Ser Gly Gly Val Leu Leu Arg Leu Gln Val Gly Glu Glu Val Trp Leu

35 40 45

Ala Gly Ala Pro Leu Ala Ser Leu Glu Ser Gln Val Arg Arg Ala Asp

50 55 60

Thr Ser Arg Asn Ser Ser Gln Cys Ser Arg Ser Leu Gly Arg Pro Thr

65 70 75 80

Ser Pro Leu His Pro Thr Ala

85

<210> 5643

<211> 1218

<212> DNA

<213> Homo sapiens

<400> 5643

nnacgcgtga ggagcctgag gcggcgggcg ggggtggctcc gcgcgcgggtg gtctcggggg

60

caaaataaca tggcagccag acgaattaca caggagactt ttgatgctgt attacaagaa

120

aaagccaaac gatatcacat ggatgccagt ggtgaggctg taagcgaaac tcttcagttt

180

aaagctcaag atctcttaag ggcagtccca agatccagag cagagatgta tgatgacgtc

240

cacagcgatg gcagatactc cctcagtggg tctgtagctc actctagaga tgccggaaga
 300
 gaaggcctga gaagtgacgt atttccaggg ccttccttca gatcaagcaa cccttccatc
 360
 agtgatgaca gctactttcg caaagaatgt ggccggggtc tgggaatttc tcaactctgat
 420
 tctcgggacc aggtcattgg ccaccggaaa ttggggcatt tccgtttctca ggactggaaa
 480
 tttgcgctcc gtggttcttg ggaacaagac tttggccatc cagttttctca agagtctctc
 540
 tggtcacagg agtatagttt tggtcctctc gcagtttttg gggacttttg atcttccagg
 600
 ctgattgaga aagagtgttt ggagaaggag agtcgggatt atgacgtgga ccatcctggg
 660
 gaggtgact ctgtgcttag gggcagcagt caagtccagg ccagagggtc agctctaaac
 720
 atcgttgacc aggaagggtc cctcctagga aagggggaga ctcagggcct gtcacagct
 780
 aaggggggtg ttgggaaact tgtcacattg agaaatgtga gcacaaaaaa aatacccacc
 840
 gtgaatcgta ttactcccaa aactcagggc actaaccaaa tccagaaaaa cactccaagt
 900
 cctgatgtga ccctggggac aaaccaggg acagaagata tccagttccc cattcagaag
 960
 atccctctgg ggctggatct gaagaatctt cggctcccca gaagaaagat gagctttgac
 1020
 atcatagata agtctgatgt tttttcaaga tttgggatag aaataatcaa atgggcagga
 1080
 ttccacacca taaaattaga ttattaaatt tttcccaaac ttttccagac tctctttgaa
 1140
 cttgaaacag aaacctgtgc taaaatgctt gcctcattca aatgttcctt aaaaccagag
 1200
 cacagagatt tttgcttt
 1218

<210> 5644

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5644

Trp	Glu	Gln	Asp	Phe	Gly	His	Pro	Val	Ser	Gln	Glu	Ser	Ser	Trp	Ser
1				5					10					15	
Gln	Glu	Tyr	Ser	Phe	Gly	Pro	Ser	Ala	Val	Leu	Gly	Asp	Phe	Gly	Ser
			20					25					30		
Ser	Arg	Leu	Ile	Glu	Lys	Glu	Cys	Leu	Glu	Lys	Glu	Ser	Arg	Asp	Tyr
		35				40					45				
Asp	Val	Asp	His	Pro	Gly	Glu	Ala	Asp	Ser	Val	Leu	Arg	Gly	Ser	Ser
	50				55					60					
Gln	Val	Gln	Ala	Arg	Gly	Arg	Ala	Leu	Asn	Ile	Val	Asp	Gln	Glu	Gly
65				70				75						80	
Ser	Leu	Leu	Gly	Lys	Gly	Glu	Thr	Gln	Gly	Leu	Leu	Thr	Ala	Lys	Gly
			85			90							95		
Gly	Val	Gly	Lys	Leu	Val	Thr	Leu	Arg	Asn	Val	Ser	Thr	Lys	Lys	Ile

```

          100          105          110
Pro Thr Val Asn Arg Ile Thr Pro Lys Thr Gln Gly Thr Asn Gln Ile
          115          120          125
Gln Lys Asn Thr Pro Ser Pro Asp Val Thr Leu Gly Thr Asn Pro Gly
          130          135          140
Thr Glu Asp Ile Gln Phe Pro Ile Gln Lys Ile Pro Leu Gly Leu Asp
          145          150          155          160
Leu Lys Asn Leu Arg Leu Pro Arg Arg Lys Met Ser Phe Asp Ile Ile
          165          170          175
Asp Lys Ser Asp Val Phe Ser Arg Phe Gly Ile Glu Ile Ile Lys Trp
          180          185          190
Ala Gly Phe His Thr Ile Lys Leu Asp Tyr
          195          200

```

<210> 5645
 <211> 156
 <212> DNA
 <213> Homo sapiens

```

<400> 5645
ccacgtccat cccgaagaag gaactgcagg tgggcgggttt ttggcctggc acagagatgt
60
cctcagatca gttccccctc tcccaggcaa gaggacacga gcactggcaa gttcacctgc
120
aaagtccccg gcctctacta ctttgtctac cacgcg
156

```

<210> 5646
 <211> 52
 <212> PRT
 <213> Homo sapiens

```

<400> 5646
Pro Arg Pro Ser Arg Arg Arg Asn Cys Arg Trp Ala Val Phe Gly Leu
1      5      10      15
Ala Gln Arg Cys Pro Gln Ile Ser Phe Pro Ser Pro Arg Gln Glu Asp
20      25      30
Thr Ser Thr Gly Lys Phe Thr Cys Lys Val Pro Gly Leu Tyr Tyr Phe
35      40      45
Val Tyr His Ala
50

```

<210> 5647
 <211> 150
 <212> DNA
 <213> Homo sapiens

```

<400> 5647
cccatggggc cgggcaccct ggcattccca ggggggtccca tggggccatt tttcccagga
60
aggcccaagg gggagccagg aatcccagcc attcccggga tccgaggacc caaagggcag
120
aagggagaac ccggcttacc eggccatccn
150

```

<210> 5648
 <211> 50
 <212> PRT
 <213> Homo sapiens

<400> 5648
 Pro Met Gly Pro Gly Thr Leu Ala Phe Pro Gly Gly Pro Met Gly Pro
 1 5 10 15
 Phe Phe Pro Gly Arg Pro Lys Gly Glu Pro Gly Ile Pro Ala Ile Pro
 20 25 30
 Gly Ile Arg Gly Pro Lys Gly Gln Lys Gly Glu Pro Gly Leu Pro Gly
 35 40 45
 His Pro
 50

<210> 5649
 <211> 345
 <212> DNA
 <213> Homo sapiens

<400> 5649
 ngggacctgc aagcccgcg ccagacctgc cagcgcgcgc gccatggctg tcgccgcgc
 60
 aaccgcctgg tccctcgat cgcgcccagc ccagactcgg actcggacac agactcggag
 120
 gacccgagtc tccggcgag cgcgggcggc ttgctccgct cgcaggtcat ccacagcgg
 180
 cacttcatgg tgctcgcgc gcacagcgac tcgctgcccc ggcggcgca ccaggagggt
 240
 ccgtggggcc ctccgacttc gggccgcgca gtatcgaccc cacactcaca cgcctcttcg
 300
 agtgcttgag cctggcctac agtggcaagc tggggctctcc caagt
 345

<210> 5650
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5650
 Met Ala Val Ala Ala Thr Ala Trp Ser Leu Gly Ser Arg Pro Ala
 1 5 10 15
 Gln Thr Arg Thr Arg Thr Gln Thr Arg Arg Thr Arg Val Ser Gly Ala
 20 25 30
 Ala Arg Ala Ala Cys Ser Ala Arg Arg Ser Ser Thr Ala Val Thr Ser
 35 40 45
 Trp Cys Arg Arg Arg Thr Ala Thr Arg Cys Pro Gly Gly Ala Thr Arg
 50 55 60
 Arg Val Arg Gly Ala Leu Arg Leu Arg Ala Ala Gln Tyr Arg Pro His
 65 70 75 80
 Thr His Thr Pro Leu Arg Val Leu Glu Pro Gly Leu Gln Trp Gln Ala
 85 90 95
 Gly Val Ser Gln

100

<210> 5651
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 5651
 ctcgaggaat attgggtctt ctgcgcggcc gtagagctcc gccaaagtgc cctgcgcgga
 60
 ggagaagtgg cgtcgagtcc ggccgggcag tagaggaaat tgcggtagtg accctcgggc
 120
 ctcgccatga agagccgctt tagcaccatt gacctccgc cgtactcgc ggagctgaat
 180
 gctagcttgc taggaatgag agtaaacaat gtttatgatg tggataataa gacatacctt
 240
 attcgtcttc aaaaaccgga ctttaaagct acacttttac ttgaatctgg catacaaatt
 300
 catacaacag aatttgagtg gcctaagaat atgatgccgt ctagttttgc catgaagtgc
 360
 cgaaaacatt tgaagagtcg gagattagtc agtgcaaac agcttggtgt ggatagaatt
 420
 gtagattttc aatttggaag tgatgaagct gcttaccatt taatcattga gctctatgat
 480
 agggggaaca ttgttcttac agattatgag tacgtaattt taaatattct aaggtttcga
 540
 actgatgagg cagatgatgt taaatttgct gttcgtgaac gctatccact tgatcatgct
 600
 agagctgctg aacct
 615

<210> 5652
 <211> 163
 <212> PRT
 <213> Homo sapiens

<400> 5652
 Met Lys Ser Arg Phe Ser Thr Ile Asp Leu Arg Ala Val Leu Ala Glu
 1 5 10 15
 Leu Asn Ala Ser Leu Leu Gly Met Arg Val Asn Asn Val Tyr Asp Val
 20 25 30
 Asp Asn Lys Thr Tyr Leu Ile Arg Leu Gln Lys Pro Asp Phe Lys Ala
 35 40 45
 Thr Leu Leu Leu Glu Ser Gly Ile Gln Ile His Thr Thr Glu Phe Glu
 50 55 60
 Trp Pro Lys Asn Met Met Pro Ser Ser Phe Ala Met Lys Cys Arg Lys
 65 70 75 80
 His Leu Lys Ser Arg Arg Leu Val Ser Ala Lys Gln Leu Gly Val Asp
 85 90 95
 Arg Ile Val Asp Phe Gln Phe Gly Ser Asp Glu Ala Ala Tyr His Leu
 100 105 110
 Ile Ile Glu Leu Tyr Asp Arg Gly Asn Ile Val Leu Thr Asp Tyr Glu
 115 120 125
 Tyr Val Ile Leu Asn Ile Leu Arg Phe Arg Thr Asp Glu Ala Asp Asp

	130		135		140										
Val	Lys	Phe	Ala	Val	Arg	Glu	Arg	Tyr	Pro	Leu	Asp	His	Ala	Arg	Ala
145				150					155						160
Ala	Glu	Pro													

<210> 5653
 <211> 1439
 <212> DNA
 <213> Homo sapiens

<400> 5653
 nnacgcgtcg catcacagcca acctgtgcgt gctgctgtac cgcagcggcg tcaaagtggg
 60
 caccttctgt ggccacacgt ccaaaaccaa tcaggtcaac tcgggcgggtg tgctgctgag
 120
 gttgcagggtg aacttgccag tgctcgtgtc ataatctccc tcggggttg tgaggaccgc
 180
 gttgaatctg atcaggctgt tgggtgcagg gggctgggtg gtctgccgag tgaccactca
 240
 gacaccgtgt cctcttgcc tgggagagggg aagcagatct gaggacatct ctgtgccagg
 300
 ccagaaaccg ccacactgca ggtgaggccc ggacccctgc ccagttcctt ctccgggatg
 360
 gacgtggggc ccagctccct gcccacctt gggctgaagc tgctgctgct cctgctgctg
 420
 ctgcccctca ggggccaagc caacacaggc tgctacggga tcccagggat gcccggcctg
 480
 cccggggcac caggaagga tgggtacgac ggactgccgg ggcccaaggg ggagccagga
 540
 atcccagcca tcccgggat ccgaggacc aaagggcaga agggagaacc cggcttaccc
 600
 ggccatcctg ggaaaaatgg ccccatggga cccctggga tgccaggggt gcccgcccc
 660
 atgggcatcc ctggagagcc aggtgaggag ggcagataca agcagaaatt ccagtcagt
 720
 ttcacgggtca ctggcagac ccaccagccc cctgcacca acagcctgat cagattcaac
 780
 gcggctctca ccaaccgca gggagattat gacacgagca ctggcaagtt cacctgcaaa
 840
 gtccccggc tctactactt tgtctaccac gcgtgcata cagccaacct gtgcgtgctg
 900
 ctgtaccgca gcggcgtcaa agtggtcacc ttctgtggcc acacgtccaa aaccaatcag
 960
 gtcaactcgg gcggtgtgct gctgaggttg caggtgggcg aggaggtgtg gctggctgtc
 1020
 aatgactact acgacatggt gggcatccag ggctctgaca gcgtcttctc cggttctctg
 1080
 ctcttccccg actagggcgg gcagatgcgc tcgagcccca cgggccttcc acctccctca
 1140
 gcttctctgca tggaccacc ttactggcca gtctgcatcc ttgcctagac cattctcccc
 1200
 accagatgga cttctcctcc agggagccca cctgaccca cccccactgc accccctccc
 1260

catgggttct ctccttctc tgaacttctt taggagtcac tgcttggtg gttcctggga
 1320
 cacttaacca atgccttctg gtactgccat tctttttttt ttttttcaag tattggaagg
 1380
 ggtggggaga tatataaata aatcatgaaa tcaataaaaa aaaaaaaaaa aaaaaaaaaa
 1439

<210> 5654

<211> 245

<212> PRT

<213> Homo sapiens

<400> 5654

Met	Asp	Val	Gly	Pro	Ser	Ser	Leu	Pro	His	Leu	Gly	Leu	Lys	Leu	Leu
1				5					10					15	
Leu	Leu	Leu	Leu	Leu	Leu	Pro	Leu	Arg	Gly	Gln	Ala	Asn	Thr	Gly	Cys
			20					25					30		
Tyr	Gly	Ile	Pro	Gly	Met	Pro	Gly	Leu	Pro	Gly	Ala	Pro	Gly	Lys	Asp
		35					40					45			
Gly	Tyr	Asp	Gly	Leu	Pro	Gly	Pro	Lys	Gly	Glu	Pro	Gly	Ile	Pro	Ala
	50					55					60				
Ile	Pro	Gly	Ile	Arg	Gly	Pro	Lys	Gly	Gln	Lys	Gly	Glu	Pro	Gly	Leu
65					70					75					80
Pro	Gly	His	Pro	Gly	Lys	Asn	Gly	Pro	Met	Gly	Pro	Pro	Gly	Met	Pro
				85					90					95	
Gly	Val	Pro	Gly	Pro	Met	Gly	Ile	Pro	Gly	Glu	Pro	Gly	Glu	Glu	Gly
			100					105					110		
Arg	Tyr	Lys	Gln	Lys	Phe	Gln	Ser	Val	Phe	Thr	Val	Thr	Arg	Gln	Thr
		115					120					125			
His	Gln	Pro	Pro	Ala	Pro	Asn	Ser	Leu	Ile	Arg	Phe	Asn	Ala	Val	Leu
	130					135					140				
Thr	Asn	Pro	Gln	Gly	Asp	Tyr	Asp	Thr	Ser	Thr	Gly	Lys	Phe	Thr	Cys
145					150						155				160
Lys	Val	Pro	Gly	Leu	Tyr	Tyr	Phe	Val	Tyr	His	Ala	Ser	His	Thr	Ala
				165					170					175	
Asn	Leu	Cys	Val	Leu	Leu	Tyr	Arg	Ser	Gly	Val	Lys	Val	Val	Thr	Phe
			180					185					190		
Cys	Gly	His	Thr	Ser	Lys	Thr	Asn	Gln	Val	Asn	Ser	Gly	Gly	Val	Leu
		195					200					205			
Leu	Arg	Leu	Gln	Val	Gly	Glu	Glu	Val	Trp	Leu	Ala	Val	Asn	Asp	Tyr
	210					215					220				
Tyr	Asp	Met	Val	Gly	Ile	Gln	Gly	Ser	Asp	Ser	Val	Phe	Ser	Gly	Phe
225					230					235					240
Leu	Leu	Phe	Pro	Asp											
				245											

<210> 5655

<211> 3810

<212> DNA

<213> Homo sapiens

<400> 5655

gatctgttgg aggaggatga gctgctagag cagaagtttc aggaggcggt gggccaggca
 60

gggnngccat ctccatcanc ctccaaggct gagctggcag aggtgaggcg agaattgggccc
120
aagtacatgg aagtccatga gaaggcctcc ttcaccaata gtgagctgca ccgtgccatg
180
aacctgcacg tcggcaacct ggcctgctc agcgggcccgc ttgaccaggt cgggctgccc
240
ctgcccacac cggccctctc cccagaggac aaggccgtgc tgcaaaacct aaagcgcac
300
ctggctaagg tgcaggagat gcgggaccag cgcgtgtccc tggagcagca gctgctgag
360
cttatccaga aagatgacat cactgcctcg ctggtcacca cagaccactc agagatgaag
420
aagttgttcg aggagcagct gaaaaagtat gaccagctga aggtgtacct ggagcagaac
480
ctggccgccc aggaccgtgt cctctgtgca ctgacagagg ccaactgca gtacgcagcc
540
gtgcgccggg tactcagcga cttggaccaa aagtggaaact ccacgctgca gacctgggtg
600
gcctcgtatg aagcctatga ggacctgatg aagaagtcgc aggagggcag ggacttctac
660
gcagatctgg agagcaaggt ggctgctctg ctggagcgcga cgcagtccac ctgccaggcc
720
cgcgaggctg cccgccagca gctcctggac agggagctga agaagaagcc gccgccacgg
780
cccacagccc caaagccgct gctgccccgc agggaggaga gtgaggcagt ggaagcagga
840
gacccccctg aggagctgcg cagcctcccc cctgacatgg tggtggccc acgactgcct
900
gacaccttc tgggaagtgc cccccgctc cactttctc ccagccctt ccccagctcc
960
acaggcccag gacccacta tctctcaggc cccttgcccc ctggtacctc ctggggcccc
1020
accagctga tacagcccag ggccccaggg ccccatgcaa tgcccgtagc acctgggcct
1080
gcccctetacc cagccccctg ctacacaccg gagctgggccc ttgtgccccg atcctcccc
1140
cagcatggcg tggtagcag tccctatgtg ggggtagggc cggccccacc agttgcagg
1200
ctccccctcg cccacctcc tcaattctca ggccccgagt tggccatggc ggttcggcca
1260
gccaccacca cagtagatag catccaggcg cccatcccc gccacacagc cccacggcca
1320
aacccacccc ctgctcctcc cccgcccctg ttcctgtgc cccacccgca gccactgccc
1380
acgccttaca cctaccctgc aggggctaag caaccatcc cagcacagca ccacttctct
1440
tctgggatcc ccacaggttt tccagcccc aggattgggc cccagcccc gcccactcct
1500
cagccccatc cttcacaagc gtttgggect cagccccac agcagcccct tccactccag
1560
catccacatc tcttcccacc ccaggcccca ggactcctac cccacaatc ccctacccc
1620
tatgcccctc agcctggggc cctggggcag ccgccacccc ccctacacac ccagctctac
1680

ccaggccccg ctcaagaccc tctgccagcc cactcagggg ctctgccttt cccagccct
1740
gggccccctc agcctcccca tccccactg gcatatgggc ctgccccctc taccagaccc
1800
atggggcccc aggcagcccc tcttaccatt cgagggccct cgtctgctgg ccagtcacac
1860
cctagtcccc acctggtgcc ttcacctgcc ccatctccag ggcttgggtc ggtacccccct
1920
cgccccccag cagcagaacc accoccttgc ctgcgcagag gcgcccagc tgcagacctg
1980
ctctctctcca gcccgagag ccagcatggc ggcactcagt ctcttggggg tgggcagccc
2040
ctgctgcagc ccaccaaggt ggatgcagct gagggtcgtc ggccgcaggc cctgcggctg
2100
attgagcggg acccctatga gcatcctgag aggctgcggc agttgcagca ggagctggag
2160
gcctttcggg gtcagctggg ggatgtggga gctctggaca ctgtctggcg agagctgcaa
2220
gatgcgcagg aacatgatgc ccgaggccgt tccatcgcca ttgcccgtg ctactcactg
2280
aagaaccggc accaggatgt catgccctat gacagtaacc gtgtgggtgt gcgctcaggc
2340
aaggatgact acatcaatgc cagctgcgtg gaggggtctt cccatactg cccccgcta
2400
gtgggcaacc aggccccact gcctggcaca gctgtgact tctgggtcat ggtccatgag
2460
cagaaagtgt cagtcattgt catgctgggt tctgaggctg agatggagaa gcaaaaagt
2520
gcacgctact tccccaccga gaggggcccag cccatggtgc acggtgccct gagcctggca
2580
ttgagcagcg tccgcagcac cgaaacccat gtggagcgcg tgctgagcct gcagttccga
2640
gaccagagcc tcaagcgtc tcttgtgcac ctgcacttcc ccacttggcc tgagttaggc
2700
ctgcccagca gcccagcaa ccttctgcgc ttcattccag aggtgcacgc acattacctg
2760
catcagcggc cgctgcacac gcccatcatt gtgcactgca gctctggtgt gggccgcagc
2820
ggagcctttg cactgctcta tgcagctgtg caggaggtgg aggtgggaa cggaatccct
2880
gagctgcctc agctggtgcg gcgcatgcgg cagcagagaa agcacatgct gcaggagaag
2940
ctgcacctca ggncttctgt atgaggcagt ggtgagacac gtggagcagg tcctgcagcg
3000
ccatggtgtg cctcctccat gcaaaccctt ggccagtga agcatcagcc agaagaacca
3060
ccttctcag gactcccagg acctggtcct cggtggggat gtgcccata gctccatcca
3120
ggccaccatt gccaaagtca gattcggcct cctggggggg tggagtcccc ggttgccagc
3180
ttgccaggcc ctgcagagcc cccaggcctc ccgccagcca gcctcccaga gtctacccca
3240
atcccatctt cctccccacc cccctttcc tccccactac ctgaggctcc ccagcctaag
3300

gaggagccgc cagtgcctga agccccagc tcggggcccc cctcctcctc cctggaattg
 3360
 ctggcctcct tgaccccaaga ggccttctcc ctggacagct cctgcgggg caaacagcgg
 3420
 atgagcaagc ataactttct gcaggcccat aacgggcaag ggctgcgggc caccggtccc
 3480
 tctgacgacc ccctcagcct tctggatcca ctctggacac tcaacaagac ctgaacaggt
 3540
 tttgcctacc tggctccttac actacatcat catcatctca tgcccacctg cccacaccca
 3600
 gcagagcttc tcagtgggca cagtctctta ctccatttc tgctgccttt ggccctgcct
 3660
 ggcccagcct gcacccctgt ggggtggaaa tgtactgcag gctctgggtc aggttctgct
 3720
 cctttatggg acccgacatt tttcagctct ttgctattga aataataaac caccctgttc
 3780
 tgtggcccgt aaaaaaaaaa aaaaaaaaaa
 3810

<210> 5656

<211> 987

<212> PRT

<213> Homo sapiens

<400> 5656

Asp	Leu	Leu	Glu	Glu	Asp	Glu	Leu	Leu	Glu	Gln	Lys	Phe	Gln	Glu	Ala
1				5					10					15	
Val	Gly	Gln	Ala	Gly	Xaa	Pro	Ser	Pro	Ser	Xaa	Ser	Lys	Ala	Glu	Leu
			20					25					30		
Ala	Glu	Val	Arg	Arg	Glu	Trp	Ala	Lys	Tyr	Met	Glu	Val	His	Glu	Lys
		35					40				45				
Ala	Ser	Phe	Thr	Asn	Ser	Glu	Leu	His	Arg	Ala	Met	Asn	Leu	His	Val
	50					55					60				
Gly	Asn	Leu	Arg	Leu	Leu	Ser	Gly	Pro	Leu	Asp	Gln	Val	Arg	Ala	Ala
65				70					75					80	
Leu	Pro	Thr	Pro	Ala	Leu	Ser	Pro	Glu	Asp	Lys	Ala	Val	Leu	Gln	Asn
			85					90					95		
Leu	Lys	Arg	Ile	Leu	Ala	Lys	Val	Gln	Glu	Met	Arg	Asp	Gln	Arg	Val
			100					105					110		
Ser	Leu	Glu	Gln	Gln	Leu	Arg	Glu	Leu	Ile	Gln	Lys	Asp	Asp	Ile	Thr
	115						120					125			
Ala	Ser	Leu	Val	Thr	Thr	Asp	His	Ser	Glu	Met	Lys	Lys	Leu	Phe	Glu
	130					135					140				
Glu	Gln	Leu	Lys	Lys	Tyr	Asp	Gln	Leu	Lys	Val	Tyr	Leu	Glu	Gln	Asn
145				150					155					160	
Leu	Ala	Ala	Gln	Asp	Arg	Val	Leu	Cys	Ala	Leu	Thr	Glu	Ala	Asn	Val
			165					170						175	
Gln	Tyr	Ala	Ala	Val	Arg	Arg	Val	Leu	Ser	Asp	Leu	Asp	Gln	Lys	Trp
			180					185					190		
Asn	Ser	Thr	Leu	Gln	Thr	Leu	Val	Ala	Ser	Tyr	Glu	Ala	Tyr	Glu	Asp
	195						200					205			
Leu	Met	Lys	Lys	Ser	Gln	Glu	Gly	Arg	Asp	Phe	Tyr	Ala	Asp	Leu	Glu
	210					215					220				
Ser	Lys	Val	Ala	Ala	Leu	Leu	Glu	Arg	Thr	Gln	Ser	Thr	Cys	Gln	Ala

225															230															235															240	
Arg	Glu	Ala	Ala	Arg	Gln	Gln	Leu	Leu	Asp	Arg	Glu	Leu	Lys	Lys	Lys																															
																245															250															255
Pro	Pro	Pro	Arg	Pro	Thr	Ala	Pro	Lys	Pro	Leu	Leu	Pro	Arg	Arg	Glu																															
																260															265															270
Glu	Ser	Glu	Ala	Val	Glu	Ala	Gly	Asp	Pro	Pro	Glu	Glu	Leu	Arg	Ser																															
																275															280															285
Leu	Pro	Pro	Asp	Met	Val	Ala	Gly	Pro	Arg	Leu	Pro	Asp	Thr	Phe	Leu																															
																290															295															300
Gly	Ser	Ala	Thr	Pro	Leu	His	Phe	Pro	Pro	Ser	Pro	Phe	Pro	Ser	Ser																															
																305															310															315
Thr	Gly	Pro	Gly	Pro	His	Tyr	Leu	Ser	Gly	Pro	Leu	Pro	Pro	Gly	Thr																															
																325															330															335
Tyr	Ser	Gly	Pro	Thr	Gln	Leu	Ile	Gln	Pro	Arg	Ala	Pro	Gly	Pro	His																															
																340															345															350
Ala	Met	Pro	Val	Ala	Pro	Gly	Pro	Ala	Leu	Tyr	Pro	Ala	Pro	Ala	Tyr																															
																355															360															365
Thr	Pro	Glu	Leu	Gly	Leu	Val	Pro	Arg	Ser	Ser	Pro	Gln	His	Gly	Val																															
																370															375															380
Val	Ser	Ser	Pro	Tyr	Val	Gly	Val	Gly	Pro	Ala	Pro	Pro	Val	Ala	Gly																															
																385															390															395
Leu	Pro	Ser	Ala	Pro	Pro	Pro	Gln	Phe	Ser	Gly	Pro	Glu	Leu	Ala	Met																															
																405															410															415
Ala	Val	Arg	Pro	Ala	Thr	Thr	Thr	Val	Asp	Ser	Ile	Gln	Ala	Pro	Ile																															
																420															425															430
Pro	Ser	His	Thr	Ala	Pro	Arg	Pro	Asn	Pro	Thr	Pro	Ala	Pro	Pro	Pro																															
																435															440															445
Pro	Cys	Phe	Pro	Val	Pro	Pro	Pro	Gln	Pro	Leu	Pro	Thr	Pro	Tyr	Thr																															
																450															455															460
Tyr	Pro	Ala	Gly	Ala	Lys	Gln	Pro	Ile	Pro	Ala	Gln	His	His	Phe	Ser																															
																465															470															475
Ser	Gly	Ile	Pro	Thr	Gly	Phe	Pro	Ala	Pro	Arg	Ile	Gly	Pro	Gln	Pro																															
																485															490															495
Gln	Pro	His	Pro	Gln	Pro	His	Pro	Ser	Gln	Ala	Phe	Gly	Pro	Gln	Pro																															
																500															505															510
Pro	Gln	Gln	Pro	Leu	Pro	Leu	Gln	His	Pro	His	Leu	Phe	Pro	Pro	Gln																															
																515															520															525
Ala	Pro	Gly	Leu	Leu	Pro	Pro	Gln	Ser	Pro	Tyr	Pro	Tyr	Ala	Pro	Gln																															
																530															535															540
Pro	Gly	Val	Leu	Gly	Gln	Pro	Pro	Pro	Pro	Leu	His	Thr	Gln	Leu	Tyr																															
																545															550															555
Pro	Gly	Pro	Ala	Gln	Asp	Pro	Leu	Pro	Ala	His	Ser	Gly	Ala	Leu	Pro																															
																565															570															575
Phe	Pro	Ser	Pro	Gly	Pro	Pro	Gln	Pro	Pro	His	Pro	Pro	Leu	Ala	Tyr																															
																580															585															590
Gly	Pro	Ala	Pro	Ser	Thr	Arg	Pro	Met	Gly	Pro	Gln	Ala	Ala	Pro	Leu																															
																595															600															605
Thr	Ile	Arg	Gly	Pro	Ser	Ser	Ala	Gly	Gln	Ser	Thr	Pro	Ser	Pro	His																															
																610															615															620
Leu	Val	Pro	Ser	Pro	Ala	Pro	Ser	Pro	Gly	Pro																																				

660										665										670																											
Gln	Ser	Pro	Gly	Gly	Gly	Gln	Pro	Leu	Leu	Gln	Pro	Thr	Lys	Val	Asp	Gln	Pro	Leu	Leu	Gln	Pro	Thr	Lys	Val	Asp	Gln	Pro	Leu	Leu	Gln	Pro	Thr	Lys	Val	Asp												
		675						680					685					680						685					690						695												
Ala	Ala	Glu	Gly	Arg	Arg	Pro	Gln	Ala	Leu	Arg	Leu	Ile	Glu	Arg	Asp	Ala	Ala	Glu	Gly	Arg	Arg	Pro	Gln	Ala	Leu	Arg	Leu	Ile	Glu	Arg	Asp	Ala	Ala	Glu	Gly	Arg	Arg	Pro	Gln	Ala	Leu	Arg	Leu	Ile	Glu	Arg	Asp
		690						695					700					690						695					700						705												
Pro	Tyr	Glu	His	Pro	Glu	Arg	Leu	Arg	Gln	Leu	Gln	Gln	Glu	Leu	Glu	Pro	Tyr	Glu	His	Pro	Glu	Arg	Leu	Arg	Gln	Leu	Gln	Glu	Leu	Glu	Pro	Tyr	Glu	His	Pro	Glu	Arg	Leu	Arg	Gln	Leu	Gln	Glu	Leu	Glu		
705						710							715											720											725												
Ala	Phe	Arg	Gly	Gln	Leu	Gly	Asp	Val	Gly	Ala	Leu	Asp	Thr	Val	Trp	Ala	Phe	Arg	Gly	Gln	Leu	Gly	Asp	Val	Gly	Ala	Leu	Asp	Thr	Val	Trp	Ala	Phe	Arg	Gly	Gln	Leu	Gly	Asp	Val	Gly	Ala	Leu	Asp	Thr	Val	Trp
						725							730											735											740												
Arg	Glu	Leu	Gln	Asp	Ala	Gln	Glu	His	Asp	Ala	Arg	Gly	Arg	Ser	Ile	Arg	Glu	Leu	Gln	Asp	Ala	Gln	Glu	His	Asp	Ala	Arg	Gly	Arg	Ser	Ile	Arg	Glu	Leu	Gln	Asp	Ala	Gln	Glu	His	Asp	Ala	Arg	Gly	Arg	Ser	Ile
						740							745											750											755												
Ala	Ile	Ala	Arg	Cys	Tyr	Ser	Leu	Lys	Asn	Arg	His	Gln	Asp	Val	Met	Ala	Ile	Ala	Arg	Cys	Tyr	Ser	Leu	Lys	Asn	Arg	His	Gln	Asp	Val	Met	Ala	Ile	Ala	Arg	Cys	Tyr	Ser	Leu	Lys	Asn	Arg	His	Gln	Asp	Val	Met
						755							760											765											770												
Pro	Tyr	Asp	Ser	Asn	Arg	Val	Val	Leu	Arg	Ser	Gly	Lys	Asp	Asp	Tyr	Pro	Tyr	Asp	Ser	Asn	Arg	Val	Val	Leu	Arg	Ser	Gly	Lys	Asp	Asp	Tyr	Pro	Tyr	Asp	Ser	Asn	Arg	Val	Val	Leu	Arg	Ser	Gly	Lys	Asp	Asp	Tyr
						770							775											780											785												
Ile	Asn	Ala	Ser	Cys	Val	Glu	Gly	Leu	Ser	Pro	Tyr	Cys	Pro	Pro	Leu	Ile	Asn	Ala	Ser	Cys	Val	Glu	Gly	Leu	Ser	Pro	Tyr	Cys	Pro	Pro	Leu	Ile	Asn	Ala	Ser	Cys	Val	Glu	Gly	Leu	Ser	Pro	Tyr	Cys	Pro	Pro	Leu
785						790							795											800											805												
Val	Ala	Thr	Gln	Ala	Pro	Leu	Pro	Gly	Thr	Ala	Ala	Asp	Phe	Trp	Leu	Val	Ala	Thr	Gln	Ala	Pro	Leu	Pro	Gly																							

<210> 5657

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 5657

<400> 5657
tgcggacagt tgaagaagcg accgaggac tgggagtcgt tagtgaggat gacgcggcat

60

ggcaagaact gcaccgcagg cgccgtctac acctaccacg agaagaagaa ggacacacgcg

120 ggagctttagc ctgaggccggg atgccgtgaa ggacttcgac

gcctcgggct atgggaccca gaacattcga ctgagctcggg atgctcgggga ggcctcgggga

tgctgttgtc tctccctgca gccttgccac gatcctgttg tcaccccaga tggctacctg
 240
 tatgagcgtg aggccatcct ggagtacatt ctgcaccaga agaaggagat tgcccggcag
 300
 atgaaggcct acgagaagca gcggggcacc cggcgcgagg agcagaagga gcttcagcgg
 360
 gcggcctcgc aggaccatgt gcggggcttc ctggagaagg agtcggctat cgtgagccgg
 420
 cccctcaacc ctttcacagc caaggccctc tcgggcacca gccagatga tgtccaacct
 480
 gggcccagtg tgggtcctcc aagtaaggac aaggacaaag tgctgcccag cttctggatc
 540
 ccgtcgtga cgcccgaagc caaggccacc aagctggaga agccgtcccg cacggtgacc
 600
 tgccccatgt caggggaagcc cctgcgcatg tcggacctga cgcccgta cttcacaccg
 660
 ctagacagct ccgtggaccg cgtggggctc atcaccgca gcgagcgcta cgtgtgtgcc
 720
 gtgaccgcg acagcctgag caacgccacc ccctgcgctg tgctgcggcc ctctggggct
 780
 gtggtcacc tcgaatgcgt ggagaagctg attcggaagg acatggtgga ccctgtgact
 840
 ggagacaaac tcacagaccg cgacatcatc gtgctgcagc ggggcggtac cggcttcgcg
 900
 ggctccggag tgaagctgca agcggagaaa tcacggccgg tgatgcaggc ctgagtgtgt
 960
 gcgggagacc aaataaacgg gcttgggtgc gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1020

<210> 5658

<211> 301

<212> PRT

<213> Homo sapiens

<400> 5658

Met	Thr	Arg	His	Gly	Lys	Asn	Cys	Thr	Ala	Gly	Ala	Val	Tyr	Thr	Tyr
1				5					10					15	
His	Glu	Lys	Lys	Lys	Asp	Thr	Ala	Ala	Ser	Gly	Tyr	Gly	Thr	Gln	Asn
			20					25					30		
Ile	Arg	Leu	Ser	Arg	Asp	Ala	Val	Lys	Asp	Phe	Asp	Cys	Cys	Cys	Leu
		35					40					45			
Ser	Leu	Gln	Pro	Cys	His	Asp	Pro	Val	Val	Thr	Pro	Asp	Gly	Tyr	Leu
	50					55					60				
Tyr	Glu	Arg	Glu	Ala	Ile	Leu	Glu	Tyr	Ile	Leu	His	Gln	Lys	Lys	Glu
65				70					75					80	
Ile	Ala	Arg	Gln	Met	Lys	Ala	Tyr	Glu	Lys	Gln	Arg	Gly	Thr	Arg	Arg
			85					90					95		
Glu	Glu	Gln	Lys	Glu	Leu	Gln	Arg	Ala	Ala	Ser	Gln	Asp	His	Val	Arg
			100					105					110		
Gly	Phe	Leu	Glu	Lys	Glu	Ser	Ala	Ile	Val	Ser	Arg	Pro	Leu	Asn	Pro
		115					120					125			
Phe	Thr	Ala	Lys	Ala	Leu	Ser	Gly	Thr	Ser	Pro	Asp	Asp	Val	Gln	Pro
	130					135					140				
Gly	Pro	Ser	Val	Gly	Pro	Pro	Ser	Lys	Asp	Lys	Asp	Lys	Val	Leu	Pro

```

145          150          155          160
Ser Phe Trp Ile Pro Ser Leu Thr Pro Glu Ala Lys Ala Thr Lys Leu
          165          170          175
Glu Lys Pro Ser Arg Thr Val Thr Cys Pro Met Ser Gly Lys Pro Leu
          180          185          190
Arg Met Ser Asp Leu Thr Pro Val His Phe Thr Pro Leu Asp Ser Ser
          195          200          205
Val Asp Arg Val Gly Leu Ile Thr Arg Ser Glu Arg Tyr Val Cys Ala
          210          215          220
Val Thr Arg Asp Ser Leu Ser Asn Ala Thr Pro Cys Ala Val Leu Arg
225          230          235          240
Pro Ser Gly Ala Val Val Thr Leu Glu Cys Val Glu Lys Leu Ile Arg
          245          250          255
Lys Asp Met Val Asp Pro Val Thr Gly Asp Lys Leu Thr Asp Arg Asp
          260          265          270
Ile Ile Val Leu Gln Arg Gly Gly Thr Gly Phe Ala Gly Ser Gly Val
          275          280          285
Lys Leu Gln Ala Glu Lys Ser Arg Pro Val Met Gln Ala
          290          295          300

```

<210> 5659

<211> 1263

<212> DNA

<213> Homo sapiens

<400> 5659

```

nttttaaaac gtaattat ttt aattctgaga ctctgggaga gggggcttag atctctgctt
60
tgggtgttct tctcagatgc ggtgctttta aaaaaaagtg taattattta atcctgagac
120
tcagagaagg cttagatcta tgcattgggt gttattctca gatgcagaga tgtaaagtc
180
atttttctct tctgttttca ggtcacatgt gccaat ttaa cgaacgggtg aaagtcagaa
240
cttctgaaat caggaagcag caaatccaca ctaaagcaca tatggacaga aagcagcaaa
300
gacttgtcta tcagccgact cctgtcacag acttttcgtg gcaaagagaa tgatacagat
360
ttggacctga gatatgacac ccagaaacct tattctgagc aagacctctg ggactggctg
420
aggaactcca cagaccttca agagcctcgg ccagggcca agagaaggcc cattgttaaa
480
acgggcaagt ttaagaaaat gtttggtatg ggcgattttc attccaacat caaaacagt
540
aagctgaacc tgttgataac tgggaaaatt gtagatcatg gcaatgggac atttagtggt
600
tatttcaggc ataattcaac tgggtcaagg aatgtatctg tcagcttggt accccctaca
660
aaaatcgtgg aatttgactt ggcacaacaa accgtgattg atgccaaaga ttccaagtct
720
ttaattgtc gcattgaata tgaaaagggt gacaaggcta ccaagaacac actctgcaac
780
tatgacctt caaaaacctg ttaccaggag caaacccaaa gtcattgtatc ctggctctgc
840

```

tccaagccct ttaaggatgat ctgtattttac atttcctttt atagtacaga ttataaactg
 900
 gtacagaaag tgtgccctga ctacaactac cacagtgcaca caccttactt tccctcggga
 960
 tgaaggatgaa catgggggtg agactgaagc ctgaggaatt aaaggatcata tgacagggtg
 1020
 gttacctcaa agaagaaggc cacatctgtt gcctggaatg tgtctacact gctgctcttg
 1080
 tcaactggct gcaaaatata ctagtggaaa acactctgat gtaatttctg cccagtcagc
 1140
 ttcacccctc agtataattg taaatcatca cagattttga attcacacct gaagacatgc
 1200
 tctcacatat agaggatcac aaacacaccg tcatgcacat ttcagcttgc gtctatcatg
 1260
 att
 1263

<210> 5660

<211> 253

<212> PRT

<213> Homo sapiens

<400> 5660

Val	Thr	Cys	Ala	Asn	Leu	Thr	Asn	Gly	Gly	Lys	Ser	Glu	Leu	Leu	Lys
1				5					10					15	
Ser	Gly	Ser	Ser	Lys	Ser	Thr	Leu	Lys	His	Ile	Trp	Thr	Glu	Ser	Ser
			20					25					30		
Lys	Asp	Leu	Ser	Ile	Ser	Arg	Leu	Leu	Ser	Gln	Thr	Phe	Arg	Gly	Lys
		35					40					45			
Glu	Asn	Asp	Thr	Asp	Leu	Asp	Leu	Arg	Tyr	Asp	Thr	Pro	Glu	Pro	Tyr
	50					55					60				
Ser	Glu	Gln	Asp	Leu	Trp	Asp	Trp	Leu	Arg	Asn	Ser	Thr	Asp	Leu	Gln
	65				70					75				80	
Glu	Pro	Arg	Pro	Arg	Ala	Lys	Arg	Arg	Pro	Ile	Val	Lys	Thr	Gly	Lys
			85					90						95	
Phe	Lys	Lys	Met	Phe	Gly	Trp	Gly	Asp	Phe	His	Ser	Asn	Ile	Lys	Thr
			100					105					110		
Val	Lys	Leu	Asn	Leu	Leu	Ile	Thr	Gly	Lys	Ile	Val	Asp	His	Gly	Asn
		115					120					125			
Gly	Thr	Phe	Ser	Val	Tyr	Phe	Arg	His	Asn	Ser	Thr	Gly	Gln	Gly	Asn
	130						135				140				
Val	Ser	Val	Ser	Leu	Val	Pro	Pro	Thr	Lys	Ile	Val	Glu	Phe	Asp	Leu
	145				150					155				160	
Ala	Gln	Gln	Thr	Val	Ile	Asp	Ala	Lys	Asp	Ser	Lys	Ser	Phe	Asn	Cys
			165						170					175	
Arg	Ile	Glu	Tyr	Glu	Lys	Val	Asp	Lys	Ala	Thr	Lys	Asn	Thr	Leu	Cys
		180						185					190		
Asn	Tyr	Asp	Pro	Ser	Lys	Thr	Cys	Tyr	Gln	Glu	Gln	Thr	Gln	Ser	His
		195					200					205			
Val	Ser	Trp	Leu	Cys	Ser	Lys	Pro	Phe	Lys	Val	Ile	Cys	Ile	Tyr	Ile
	210					215					220				
Ser	Phe	Tyr	Ser	Thr	Asp	Tyr	Lys	Leu	Val	Gln	Lys	Val	Cys	Pro	Asp
	225				230					235				240	
Tyr	Asn	Tyr	His	Ser	Asp	Thr	Pro	Tyr	Phe	Pro	Ser	Gly			

245

250

<210> 5661

<211> 578

<212> DNA

<213> Homo sapiens

<400> 5661

agagctcgaa ggggccatat gacactcctc ccggaccctt ggacacacac agccctgggg
 60
 actggatgcc ttggagcatg caagtccaga gcaccctggg agccctgggtg catggggaccc
 120
 ataaccagtg gcacggcaag gaccagcag gaagcaccag ccactggccc cgacctcccc
 180
 caccaggac ctgacgggca cttagacaca cacagtggcc tgagctccaa ctccagcatg
 240
 accacgcggg agcttcagca gtactggcag aaccagaaat gccgctggaa gcacgtcaaa
 300
 ctgctctttg agatcgcttc agctcgcatc gaggagagaa aagtctctaa gtttgtgatg
 360
 gggaaatcaa ggcttgaga gatgacttat ccagggtcac gtggcgagac agggacagca
 420
 ccagaaccag acccgagatg tccacgtcaa agtgacatgc tctgagaggc agcacacaca
 480
 gaataaccct gcatccaaat tccaggaagc tcttaggggt catccagctg ggcctagggg
 540
 tgcagggtca gtgtgaggc ctgggcaggg ccgctagc
 578

<210> 5662

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5662

Met	Thr	Leu	Leu	Pro	Asp	Pro	Trp	Thr	His	Thr	Ala	Leu	Gly	Thr	Gly
1				5					10					15	
Cys	Leu	Gly	Ala	Cys	Lys	Ser	Arg	Ala	Pro	Trp	Glu	Pro	Trp	Cys	Met
			20					25					30		
Gly	Pro	Ile	Thr	Gln	Cys	Thr	Ala	Arg	Thr	Gln	Gln	Glu	Ala	Pro	Ala
			35				40					45			
Thr	Gly	Pro	Asp	Leu	Pro	His	Pro	Gly	Pro	Asp	Gly	His	Leu	Asp	Thr
			50			55					60				
His	Ser	Gly	Leu	Ser	Ser	Asn	Ser	Ser	Met	Thr	Thr	Arg	Glu	Leu	Gln
					70				75					80	
Gln	Tyr	Trp	Gln	Asn	Gln	Lys	Cys	Arg	Trp	Lys	His	Val	Lys	Leu	Leu
			85					90					95		
Phe	Glu	Ile	Ala	Ser	Ala	Arg	Ile	Glu	Glu	Arg	Lys	Val	Ser	Lys	Phe
			100					105					110		
Val	Met	Gly	Lys	Ser	Arg	Pro	Gly	Glu	Met	Thr	Tyr	Pro	Gly	Ser	Arg
			115				120					125			
Gly	Glu	Thr	Gly	Thr	Ala	Pro	Glu	Pro	Asp	Pro	Arg	Cys	Pro	Arg	Gln
			130			135					140				
Ser	Asp	Met	Leu												

145

<210> 5663
 <211> 857
 <212> DNA
 <213> Homo sapiens

<400> 5663
 tttttttttt tttttttgca gtaagtaact cagaatgact ttactcagga aatatgacca
 60
 tgactcactg gctaggagtg ccccatgccc agttcttaga gacccttgat agtccttaga
 120
 agacaggagg ctgccgtggg caagaagggg caagccttga agtctcacgg caccctctgt
 180
 ggtggaggta taaggctcag gggccaacta ctgggtcttg cagtcccat cggtgctgtg
 240
 ggctgtcttc accttcttta gttccttctg tagctcagac tcggccacca caacctcctt
 300
 tggcttctgg taagagatga tcagggtgca gttggcgtgg gcaaagctca gcaaggcgtc
 360
 atccagaggt agctggtgtc tatctagatc aggaatggag aacttcttgt agtacttctt
 420
 gttggttgtt ctgacaatga tgcagcgtc cttctgggtcc acagagacac tatagacatc
 480
 cttaggatag gggagggttc gaatccgcc ctggaaactc atcttggtgt ccttgcgcat
 540
 gaagatagga ttggcattgc tttccttgat gagttcaggc cccagggtcc ctgctcctag
 600
 gggcgctggg tctcctactt caagctgcc ctggcccatg gctcccaggg cacttttcac
 660
 acgccacttt ctcaacaagta gttcactcgt cttctcgtca tattcttcag ccatttcctt
 720
 gccgtctggg aataaatagt gaaccttcct tctcccgctc tgcagcagcg cagtcttctg
 780
 ggctgtccgc agactctcca accagcccg caccgccatc tttccctgc taagcagcac
 840
 gccagccgc tgccatg
 857

<210> 5664
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 5664
 Met Ala Val Thr Gly Trp Leu Glu Ser Leu Arg Thr Ala Gln Lys Thr
 1 5 10 15
 Ala Leu Leu Gln Asp Gly Arg Arg Lys Val His Tyr Leu Phe Pro Asp
 20 25 30
 Gly Lys Glu Met Ala Glu Glu Tyr Asp Glu Lys Thr Ser Glu Leu Leu
 35 40 45
 Val Arg Lys Trp Arg Val Lys Ser Ala Leu Gly Ala Met Gly Gln Trp
 50 55 60
 Gln Leu Glu Val Gly Asp Pro Ala Pro Leu Gly Ala Gly Asn Leu Gly

```

65          70          75          80
Pro Glu Leu Ile Lys Glu Ser Asn Ala Asn Pro Ile Phe Met Arg Lys
          85          90          95
Asp Thr Lys Met Ser Phe Gln Trp Arg Ile Arg Asn Leu Pro Tyr Pro
          100          105          110
Lys Asp Val Tyr Ser Val Ser Val Asp Gln Lys Glu Arg Cys Ile Ile
          115          120          125
Val Arg Thr Thr Asn Lys Lys Tyr Tyr Lys Lys Phe Ser Ile Pro Asp
          130          135          140
Leu Asp Arg His Gln Leu Pro Leu Asp Asp Ala Leu Leu Ser Phe Ala
          145          150          155          160
His Ala Asn Cys Thr Leu Ile Ile Ser Tyr Gln Lys Pro Lys Glu Val
          165          170          175
Val Val Ala Glu Ser Glu Leu Gln Lys Glu Leu Lys Lys Val Lys Thr
          180          185          190
Ala His Ser Asn Asp Gly Asp Cys Lys Thr Gln
          195          200

```

<210> 5665
 <211> 531
 <212> DNA
 <213> Homo sapiens

```

<400> 5665
gtcaagtcct gtaggcagca tagggccctg gctcagcttt tctctgcaga ggcctcgctt
60
gagtgggtgg gggttgcccc cccgcagatc tccacgggag ggggaggggt caggcctccc
120
cagcgccct ctgaagtcac ttgcttcacg gaggtgttac tgtctgctgc tggacagagc
180
atgatggggg ctgcaagggc tccctcaaac cctggactcc tccaacagag ggctcctggt
240
tgccaggctc agctctgccc tgcgtcggcc ccagggcgta gggaggggtgt ttaatcctgg
300
cccgggcctt ccccgcaggt ggagcgcgtg tcgcacccgc tgctgcagca gcagtatgag
360
ctgtaccggg agcgcctgct gcagcgatgc gagcggcgcc cggaggagca ggtgctgtac
420
cacggcacga cggcaccggc agtgctgac atctgcgccc acggcttcaa ccgcagcttc
480
tgcgccgca acgccacggt ctacgggaag ggcgtgtatt tcgccaggcg c
531

```

<210> 5666
 <211> 79
 <212> PRT
 <213> Homo sapiens

```

<400> 5666
Ser Trp Pro Gly Pro Ser Pro Gln Val Glu Arg Val Ser His Pro Leu
1          5          10          15
Leu Gln Gln Gln Tyr Glu Leu Tyr Arg Glu Arg Leu Leu Gln Arg Cys
20          25          30
Glu Arg Arg Pro Val Glu Gln Val Leu Tyr His Gly Thr Thr Ala Pro

```

```

      35              40              45
Ala Val Pro Asp Ile Cys Ala His Gly Phe Asn Arg Ser Phe Cys Gly
      50              55              60
Arg Asn Ala Thr Val Tyr Gly Lys Gly Val Tyr Phe Ala Arg Arg
      65              70              75

```

<210> 5667
 <211> 858
 <212> DNA
 <213> Homo sapiens

<400> 5667
 nattcggcac gaggtagtca aagtatgcag cctccaatta ttccactctt ccctgttgtc
 60
 aagaaagata tgacatttct acatgaagga aatgactcca aagtagatgg tttagtaaac
 120
 tttgagaagt taagaatgat ttccaaggaa atccgccaag ttgttcgaat gacttctgct
 180
 aacatggacc cagctatgat gtttcgacag aggtcactga gtcaaggaag cacaattca
 240
 aacatgctgg atgttcaggg aggtgctcac aaaaaaaggg cagccgcag ctctctgctt
 300
 aatgccaaga agctatatga ggatgccccaa atggcaagga aggtgaagca gtatctttcc
 360
 agtctcgatg tagagacaga tgaggagaag ttccagatga tgtcattaca gntggagcct
 420
 gcatatggta cctgtgagta caagttttca tttatgtgac gctaaagagc acaacaaaat
 480
 aaaaacttat ttctctagaa ttatacctaa gtcccaagaa aattaacttt cactcacaaa
 540
 agattgctgg cataccttaa gcatcatgtg atccaattaa tcacagactg aatcccatcc
 600
 attcctgatg gctacactat ccaaaaaata gagggataag tagatcttta aaaagctttt
 660
 taattctttt aaaaactgga tcattataga ggaggctttc tgtttgagaa catttttata
 720
 ttcattcccta aagagtaaac ataagtggaa tttttacctc tttttatttc atggataata
 780
 tttaccaact agaaaatata agaaatttga ttaaaacacc agtgataata ggtagcttac
 840
 aggtgccagt agtaaggt
 858

<210> 5668
 <211> 152
 <212> PRT
 <213> Homo sapiens

```

<400> 5668
Xaa Ser Ala Arg Gly Ser Gln Ser Met Gln Pro Pro Ile Ile Pro Leu
  1              5              10              15
Phe Pro Val Val Lys Lys Asp Met Thr Phe Leu His Glu Gly Asn Asp
      20              25              30
Ser Lys Val Asp Gly Leu Val Asn Phe Glu Lys Leu Arg Met Ile Ser

```

```

<400> 5669
tttgtgctgt caccggcac agaccctgct gccgacctct acaagtttgc cgaagaaatg
60
aagtttctcca aaaagctctc tgccatctcc ctggggccagg ggcagggccc tcgggcagaa
120
gccatgatgc gcagctccat agagaggggc aaatgggtct tcttcagaa ctgccacctg
180
gcaccaagct ggatgccagc cctagaacgc ctcatcgagc acatcaaccc cgacaaggta
240
cacagggact tccgcctctg gtcaccagc ctgcccagca acaagttccc agtgtccatc
300
ctgcagaacg gtcceaagat gaccattgag ccgccacgcg gtgtcagggc caacctgctg
360
aagtcctata gtagccttgg tgaagacttc ctcaactcct gccacaaggc gatggagtgc
420
aagtctctgc tgetgtctct gtgcttgctc catgggaacg ccctggagcg ccgtaagtct
480
gggcccctgg gcttcaacat cccctatgag ttcacggatg gagatctgag catctgcac
540
agccagctca agatgttctt ggacgaatat gatgacatcc cctacaaggc cctcaagtac
600
acggcagggg agatcaatta cgggggccgt gtcactgatg actgggaccg gcgctgcac
660
atgaacatct tggaggactt ctacaaccct gacgtgctct cccctgagca cagctacagc
720
gcctcgggca tctaccacca gatcccgctt acctacgacc tccacggcta cctctcctac
780
atcaagagcc tcccactcaa tgatatgcct gagatctttg gcctgcatga caatgccaac
840
atcacctttg ccgagaacga gacgttcgcc ctctggggca ccatcatcca gctgcaaccc
900
aaatcatctt ctgcaggcag ccagggcccg gaggagatag tggaggacgt cacccaaaaa
960

```

attctgctca aggtgcctga gcctatcaac ttgcaatggg tgatggccaa gtacccagtg
 1020
 ctgtatgagg aatcaatgaa cacagtacta gtacaagagg tcattaggta caatcggctg
 1080
 ctgcaggtga tcacacagac actgcaagac ctactcaagg cactcaaggg gctggtagtg
 1140
 atgtcctctc agctggagct gatggctgcc agcctgtaca acaatactgt gcctgagctc
 1200
 tggagtgcc aaggctaccc atcgtcgaag cctctgtcat catgggtcat ggacctgctg
 1260
 caacgcctgg actttctgca ggcctggatc caagatggca tcccagctgt cttctggatc
 1320
 agtggattct tcttccccca ggctttctta acaggcactc tgcagaattt tgcccgcaa
 1380
 tttgtcatct ccattgacac catctccttt gatttcaagg tgatgtttga ggcacatca
 1440
 gagttaacac aaagacccca agtaggtgct tatatccatg gattattcct ggaaggtgcc
 1500
 cgctgggac cagaggcctt ccagctggct gagtctcagc ccaaggagct gtacacagag
 1560
 atggccgtta tctggctctt gccaacaccc aaccgcaagg cccaggacca ggacttttac
 1620
 ctgtgcccc tctacaagac actgactcgt gctggaacac tatcaaccac aggacactct
 1680
 accaactatg tcattgctgt ggagatcccc acccatcagc cccagcgaca ctggataaag
 1740
 cgtgggtggtg cctcatctg tgccctggac tactagactc agacagaagg gctggggcca
 1800
 ttaaagctga attttctaag caaaaaaaaa aaaaaaaaa aa
 1842

<210> 5670

<211> 591

<212> PRT

<213> Homo sapiens

<400> 5670

Phe	Val	Leu	Ser	Pro	Gly	Thr	Asp	Pro	Ala	Ala	Asp	Leu	Tyr	Lys	Phe
1				5					10					15	
Ala	Glu	Glu	Met	Lys	Phe	Ser	Lys	Lys	Leu	Ser	Ala	Ile	Ser	Leu	Gly
			20					25					30		
Gln	Gly	Gln	Gly	Pro	Arg	Ala	Glu	Ala	Met	Met	Arg	Ser	Ser	Ile	Glu
		35					40					45			
Arg	Gly	Lys	Trp	Val	Phe	Phe	Gln	Asn	Cys	His	Leu	Ala	Pro	Ser	Trp
	50					55					60				
Met	Pro	Ala	Leu	Glu	Arg	Leu	Ile	Glu	His	Ile	Asn	Pro	Asp	Lys	Val
65					70					75				80	
His	Arg	Asp	Phe	Arg	Leu	Trp	Leu	Thr	Ser	Leu	Pro	Ser	Asn	Lys	Phe
				85					90					95	
Pro	Val	Ser	Ile	Leu	Gln	Asn	Gly	Ser	Lys	Met	Thr	Ile	Glu	Pro	Pro
			100					105					110		
Arg	Gly	Val	Arg	Ala	Asn	Leu	Leu	Lys	Ser	Tyr	Ser	Ser	Leu	Gly	Glu
		115				120						125			
Asp	Phe	Leu	Asn	Ser	Cys	His	Lys	Val	Met	Glu	Phe	Lys	Ser	Leu	Leu

130	135	140
Leu Ser Leu Cys Leu Phe His Gly Asn Ala Leu Glu Arg Arg Lys Phe		
145	150	155
Gly Pro Leu Gly Phe Asn Ile Pro Tyr Glu Phe Thr Asp Gly Asp Leu		
	165	170
Arg Ile Cys Ile Ser Gln Leu Lys Met Phe Leu Asp Glu Tyr Asp Asp		
	180	185
Ile Pro Tyr Lys Val Leu Lys Tyr Thr Ala Gly Glu Ile Asn Tyr Gly		
	195	200
Gly Arg Val Thr Asp Asp Trp Asp Arg Arg Cys Ile Met Asn Ile Leu		
	210	215
Glu Asp Phe Tyr Asn Pro Asp Val Leu Ser Pro Glu His Ser Tyr Ser		
225	230	235
Ala Ser Gly Ile Tyr His Gln Ile Pro Pro Thr Tyr Asp Leu His Gly		
	245	250
Tyr Leu Ser Tyr Ile Lys Ser Leu Pro Leu Asn Asp Met Pro Glu Ile		
	260	265
Phe Gly Leu His Asp Asn Ala Asn Ile Thr Phe Ala Gln Asn Glu Thr		
	275	280
Phe Ala Leu Leu Gly Thr Ile Ile Gln Leu Gln Pro Lys Ser Ser Ser		
290	295	300
Ala Gly Ser Gln Gly Arg Glu Glu Ile Val Glu Asp Val Thr Gln Asn		
305	310	315
Ile Leu Leu Lys Val Pro Glu Pro Ile Asn Leu Gln Trp Val Met Ala		
	325	330
Lys Tyr Pro Val Leu Tyr Glu Glu Ser Met Asn Thr Val Leu Val Gln		
	340	345
Glu Val Ile Arg Tyr Asn Arg Leu Leu Gln Val Ile Thr Gln Thr Leu		
	355	360
Gln Asp Leu Leu Lys Ala Leu Lys Gly Leu Val Val Met Ser Ser Gln		
370	375	380
Leu Glu Leu Met Ala Ala Ser Leu Tyr Asn Asn Thr Val Pro Glu Leu		
385	390	395
Trp Ser Ala Lys Ala Tyr Pro Ser Leu Lys Pro Leu Ser Ser Trp Val		
	405	410
Met Asp Leu Leu Gln Arg Leu Asp Phe Leu Gln Ala Trp Ile Gln Asp		
	420	425
Gly Ile Pro Ala Val Phe Trp Ile Ser Gly Phe Phe Phe Pro Gln Ala		
	435	440
Phe Leu Thr Gly Thr Leu Gln Asn Phe Ala Arg Lys Phe Val Ile Ser		
	450	455
Ile Asp Thr Ile Ser Phe Asp Phe Lys Val Met Phe Glu Ala Pro Ser		
465	470	475
Glu Leu Thr Gln Arg Pro Gln Val Gly Cys Tyr Ile His Gly Leu Phe		
	485	490
Leu Glu Gly Ala Arg Trp Asp Pro Glu Ala Phe Gln Leu Ala Glu Ser		
	500	505
Gln Pro Lys Glu Leu Tyr Thr Glu Met Ala Val Ile Trp Leu Leu Pro		
	515	520
Thr Pro Asn Arg Lys Ala Gln Asp Gln Asp Phe Tyr Leu Cys Pro Ile		
	530	535
Tyr Lys Thr Leu Thr Arg Ala Gly Thr Leu Ser Thr Thr Gly His Ser		
545	550	555
Thr Asn Tyr Val Ile Ala Val Glu Ile Pro Thr His Gln Pro Gln Arg		
	560	

565 570 575
 His Trp Ile Lys Arg Gly Val Ala Leu Ile Cys Ala Leu Asp Tyr
 580 585 590
 <210> 5671
 <211> 818
 <212> DNA
 <213> Homo sapiens
 <400> 5671
 nngcgcgccca gggaaagtgg aagttggatt ctgaaagatc gaggtgccca caggaatttt
 60
 atggtcgtcg gatattgaag acttgaacta gactgggggt tctccttgca tttcttgct
 120
 gttgcctatc tttgtcctct ctcttcgggc ttcgagatga atgtgcagcc ctgttctagg
 180
 tgtgggtatg gggtttatcc tgccgagaag atcagctgta tagatcagat atggcataaa
 240
 gcctgttttc actgtgaagt ttgcaagatg atgctgtctg ttaataaact tgtgagtcac
 300
 cagaaaaagc cgtactgtca cgcccataac cctaagaaca acactttcac cagtgtctat
 360
 cacactccat taaatctaaa tgtgaggaca tttccagagg ccatcagtg gatccatgac
 420
 caagaagatg gtgaacagtg taaatcagtt tttcattggg acatgaaatc caaggataag
 480
 gaaggtgcac ctaacaggca gccactggca aatgagagag cctattggac tggatatggg
 540
 gaaggggaatg cttggtgccc aggagctctg ccagaccccc aaattgtaag gatggttgag
 600
 gctcgaaagt ctcttggtga ggaatataca gaagactatg agcaaccag gggcaagggg
 660
 agctttccag ccatgatcac acctgcttat caaagggcca agaaagccaa ccagctggcc
 720
 agccaagtgg agtataagag agggcatgat gaacgcatct ccaggttctc cacggtggcg
 780
 gatactcctg agctgctacg gagcaaggct tggggcac
 818

<210> 5672
 <211> 220
 <212> PRT
 <213> Homo sapiens

<400> 5672
 Met Asn Val Gln Pro Cys Ser Arg Cys Gly Tyr Gly Val Tyr Pro Ala
 1 5 10 15
 Glu Lys Ile Ser Cys Ile Asp Gln Ile Trp His Lys Ala Cys Phe His
 20 25 30
 Cys Glu Val Cys Lys Met Met Leu Ser Val Asn Asn Phe Val Ser His
 35 40 45
 Gln Lys Lys Pro Tyr Cys His Ala His Asn Pro Lys Asn Asn Thr Phe
 50 55 60
 Thr Ser Val Tyr His Thr Pro Leu Asn Leu Asn Val Arg Thr Phe Pro
 65 70 75 80

Glu Ala Ile Ser Gly Ile His Asp Gln Glu Asp Gly Glu Gln Cys Lys
 85 90 95
 Ser Val Phe His Trp Asp Met Lys Ser Lys Asp Lys Glu Gly Ala Pro
 100 105 110
 Asn Arg Gln Pro Leu Ala Asn Glu Arg Ala Tyr Trp Thr Gly Tyr Gly
 115 120 125
 Glu Gly Asn Ala Trp Cys Pro Gly Ala Leu Pro Asp Pro Glu Ile Val
 130 135 140
 Arg Met Val Glu Ala Arg Lys Ser Leu Gly Glu Glu Tyr Thr Glu Asp
 145 150 155 160
 Tyr Glu Gln Pro Arg Gly Lys Gly Ser Phe Pro Ala Met Ile Thr Pro
 165 170 175
 Ala Tyr Gln Arg Ala Lys Lys Ala Asn Gln Leu Ala Ser Gln Val Glu
 180 185 190
 Tyr Lys Arg Gly His Asp Glu Arg Ile Ser Arg Phe Ser Thr Val Ala
 195 200 205
 Asp Thr Pro Glu Leu Leu Arg Ser Lys Ala Trp Gly
 210 215 220

<210> 5673

<211> 1279

<212> DNA

<213> Homo sapiens

<400> 5673

ntttttttttt tttgaagcca gcatttccct ttatttctgg atggaaacgg ggcctaaaa
 60
 gcagaaatca atatttttgt ttgaaagatg cagtcattgt aatttcactt ttggctaaaa
 120
 ccgagacgat aaaagaacag ttgggtgttt ataggatgcc ctcaaagtga gctggctaag
 180
 tgagctgggc tctaacttca ctcacaaatt tatagtacag ctaagaaggc cagtctgtcc
 240
 atgaaaggga gccgagacaa gacgagggcg gcctcttcca ggcctgtgcc aagtgtcctt
 300
 ggggtcccg ccatgtccac acttctgcag catccgcaga acatgtggcc gggtcctgcc
 360
 cagcagcagg gacagccaag tgggaggcag gcatggtgca cacctgggga ggcctcctgt
 420
 gcagaagcag cccacagta gcagcccat ccagaggaag accactccgg agggccacag
 480
 gcctctgcag ccctggcact gccgcccagc cctccatctc agcgggatgt gcagggtgag
 540
 acaggaatgc agggacgttc tgcccctagg tcagcctctt catccgcctg ttgtgcttcg
 600
 atgggtcaagg ttgccctgtc cacagctgct gcaacgccat ccagggtctc gtcttgtctc
 660
 tccagctcac tctcggcctc cgggccagcc ccttcattct cctcaggatc tgggttagtt
 720
 cctgggtatc tgcctcagaa agggctggca ggcttgtctg cagggtcagt gctgtgccct
 780
 cctgggtctc tgccgggtggc tcacggtgca gggtacggcc catcagccca gatgtctgat
 840

gccagactga gcagctcttc tctgcggggg aagaggttct tgcgcttctg agcaccaatg
 900
 catctttctaa cagctccatc ttcttgetga actgcacttc taaaatgggg ataacctctg
 960
 gcatcttggc agatatcaaa cgataggcca tgtctggctt tccaataaac cgctggcgga
 1020
 tgctaatttc gtaagggtgag tggaccttga tgcgtccac gtcttctctt tcaaacctgt
 1080
 gcatgagcaa agaactggag tcatgtatct ccaacccaga cacaaggacg gtgagcctcc
 1140
 ctggtttaac gtgagactct gttctgtggg aaataacagc aggaattttt atcagtatcc
 1200
 cttctttccc aaagggttca caactgggtca tggagacatc ttccctgggc tttgtttccg
 1260
 gtggtgtctt ccaaagctt
 1279

<210> 5674

<211> 81

<212> PRT

<213> Homo sapiens

<400> 5674

Leu	His	Ser	Gln	Ile	Tyr	Ser	Thr	Ala	Lys	Lys	Ala	Ser	Leu	Ser	Met
1			5						10				15		
Lys	Gly	Ser	Arg	Asp	Lys	Thr	Arg	Ala	Ala	Ser	Ser	Arg	Pro	Val	Pro
			20					25					30		
Ser	Val	Leu	Gly	Val	Pro	Pro	Trp	Ser	Thr	Leu	Leu	Gln	His	Pro	Gln
			35				40					45			
Asn	Met	Trp	Pro	Gly	Pro	Ala	Gln	Gln	Gln	Gly	Gln	Pro	Ser	Gly	Arg
	50					55				60					
Gln	Ala	Trp	Cys	Thr	Pro	Gly	Glu	Ala	Pro	Gly	Ala	Glu	Ala	Ala	Pro
65					70					75					80
Gln															

<210> 5675

<211> 1074

<212> DNA

<213> Homo sapiens

<400> 5675

ntttccact taaatacaaa ctttattctc tctccaagaa gatgcagacg tcacagggtgg
 60
 ccctgagctc ccacccgagg cttaggccca aggggcctct tccaggctga gggcctgctg
 120
 gggctggggc aggggctgag gctgaaagca gcagcctgcc tagtggggtga cgccaggggc
 180
 cggtgtaaca tggcaccgag gttggggcca cagcaatgtg tgggacgggtg ggggtgggctg
 240
 gggcccttgg ctccaagcat tagttctcca agctctggtc cgttctccta cctccttcaa
 300
 ggggcaccag ggctacaagg tggtagtga gtattggggc ccgactcctg gggcactgga
 360

gtggtctcta ggcccgaggc cccaaggaga gggctgggtt tctgggagag tgctggctct
 420
 tcctctctgg gcttgccat cttgacagct tcctcgtagg aggggtggagg ctccggggtg
 480
 tacaggctgt aggcaggagg agccgtggag tccagggtcca gctccccaaa gggcaggggc
 540
 aaccgcatgc ccagtgggta ctgcacggag ctgtaggagg tcacagtgt gtgtacaggg
 600
 ctgtcactgt ccatagggat gactgccacg tcgcagggt gccgtgctgg tggcagatgt
 660
 ggctgggcct gtgcctgctt ccggaggcag cagaaccgga cacaaccagc tgtgacacca
 720
 cacagcagaa gcaggaggac cgccagcagg atgagcctag gagagcaagg ctctaccact
 780
 ggactgaccc tcggccaccg ggcacctgca ccctggggaa tgtcgtggca caaccaccga
 840
 agacaggtta acaggataaa aagcagacaa tgtctctcca tgtcggagac cgccgtggcc
 900
 agagcctggc ctccggctgc tgggcctgcc ctggctatct ctctgggct ggccaggggt
 960
 ggccttgggc tcaactccag gactcgtgt cctcagcgag tgccccactg ctgagcggga
 1020
 tcgtagggga ctcccgcgga ggccaggcgg gagagttggg aggggaaggtc ctgg
 1074

<210> 5676

<211> 145

<212> PRT

<213> Homo sapiens

<400> 5676

Glu	Val	Thr	Val	Leu	Cys	Thr	Gly	Leu	Ser	Leu	Ser	Ile	Gly	Met	Thr
1				5				10					15		
Ala	Thr	Ser	Gln	Gly	Cys	Arg	Ala	Gly	Gly	Arg	Cys	Gly	Trp	Ala	Cys
			20					25					30		
Ala	Cys	Phe	Arg	Arg	Gln	Gln	Asn	Arg	Thr	Gln	Pro	Ala	Val	Thr	Pro
		35					40					45			
His	Ser	Arg	Ser	Arg	Arg	Thr	Ala	Ser	Arg	Met	Ser	Leu	Gly	Glu	Gln
	50					55					60				
Gly	Ser	Thr	Thr	Gly	Leu	Thr	Leu	Gly	His	Arg	Ala	Pro	Ala	Pro	Trp
65					70				75					80	
Gly	Met	Ser	Trp	His	Asn	His	Arg	Arg	Gln	Val	Asn	Arg	Ile	Lys	Ser
				85					90					95	
Arg	Gln	Cys	Leu	Ser	Met	Ser	Glu	Thr	Ala	Val	Ala	Arg	Ala	Trp	Pro
		100						105					110		
Arg	Ala	Ala	Gly	Pro	Ala	Leu	Ala	Ile	Ser	Pro	Gly	Leu	Ala	Arg	Gly
		115					120					125			
Gly	Leu	Gly	Leu	Thr	Pro	Arg	Thr	Arg	Cys	Pro	Gln	Arg	Val	Pro	His
	130					135					140				

Cys

145

<210> 5677

<211> 477

<212> DNA

<213> Homo sapiens

<400> 5677

```

agcagctggt cctctttgaa gaggtcgatg ctgaaaggag gccgcctgac tccatggcaa
60
aaaaggacac tgggtgaagta gcggtagcac tctccacgt tgcccaaggg ggttgctggt
120
agggaaagca agatgcagca gtgaggccct ctctggtatc cattcattca cttcactcaa
180
cagctgttta tgaccatgag caatacaagc cttgtgaaga tcttgagca gggcacaagc
240
cgctgacgtc tgctccagtg agaagccctg ctgccttccc caattcgctt tctttccgca
300
gccgccgtg ccccgacccc ggatctgcat gtggaagtac ctggacgtcc attccatgca
360
ccagctggag aagaccacca atgctgagat gaggagggtg ctggctgagc tgctggagct
420
agggtgtcct gagcagagcc tgagcgacgc catcacctg gacctcttct gccgcgg
477

```

<210> 5678

<211> 151

<212> PRT

<213> Homo sapiens

<400> 5678

```

Met Ala Ser Leu Arg Leu Cys Ser Gly His Pro Ser Ser Ser Ser Ser
1           5           10           15
Ala Ser Thr Ser Leu Ile Ser Ala Leu Val Val Phe Ser Ser Trp Cys
20           25           30
Met Glu Trp Thr Ser Arg Tyr Phe His Met Gln Ile Arg Gly Arg Gly
35           40           45
Ser Gly Gly Cys Gly Lys Lys Ala Asn Trp Gly Arg Gln Gln Gly Phe
50           55           60
Ser Leu Glu Gln Thr Ser Ala Ala Cys Ala Leu Leu Gln Asp Leu His
65           70           75           80
Lys Ala Cys Ile Ala His Gly His Lys Gln Leu Leu Ser Glu Val Asn
85           90           95
Glu Trp Ile Pro Glu Arg Ala Ser Leu Leu His Leu Ala Phe Pro Thr
100          105          110
Ser Asn Pro Leu Gly Gln Arg Gly Gly Val Leu Pro Leu Leu His Gln
115          120          125
Cys Pro Phe Leu Pro Trp Ser Gln Ala Ala Ser Phe Gln His Arg Pro
130          135          140
Leu Gln Arg Gly Thr Ala Ala
145          150

```

<210> 5679

<211> 665

<212> DNA

<213> Homo sapiens

<400> 5679

nngccccctcc aggagggagc cgggagatta cgcagctcca tgtaggtcta cgtttaggtt
 60
 gggaggatct accatgaaga aggtcaagaa gaaaagggtca gaggccagac gccaccggac
 120
 tccacctccc agcatgctgg ctccaattcc acctctcagc agcctagccc tgaatccaca
 180
 ccacagcagc ctagtcctga atccacacca cagcagccta gccctgaatc cacaccacag
 240
 cattccagcc ttgaaaccac ctcccggcag ccagcattcc aagcccttcc agcaccggaa
 300
 atccgcccgt cctcttgctg ccttttatct ccagatgcta acgtgaaggc agccctcaa
 360
 tccagaaaag cagaaaatct tcaagaaaac cctccagtca tcgtaacgcg tgcctccaa
 420
 gccctcgaa ctgtggctgt ggctctgggg gctctaggag ctgcctacta catcactgaa
 480
 tccttgtaga caagccccta ggcccacagt ctggcagacc tccaccagcc ccaggagttg
 540
 ataggtgatg ggcgtgggag aagatgttca gaatatctca aaagccaagt ccagaagatc
 600
 cagtttccat caaagggacc tctcttgta ccaaaattta aaaaaagaaa aaaaaaacga
 660
 aaaaa
 665

<210> 5680
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 5680
 Val Gly Arg Ile Tyr His Glu Glu Gly Gln Glu Glu Lys Val Arg Gly
 1 5 10 15
 Gln Thr Pro Pro Asp Ser Thr Ser Gln His Ala Gly Ser Asn Ser Thr
 20 25 30
 Ser Gln Gln Pro Ser Pro Glu Ser Thr Pro Gln Gln Pro Ser Pro Glu
 35 40 45
 Ser Thr Pro Gln Gln Pro Ser Pro Glu Ser Thr Pro Gln His Ser Ser
 50 55 60
 Leu Glu Thr Thr Ser Arg Gln Pro Ala Phe Gln Ala Leu Pro Ala Pro
 65 70 75 80
 Glu Ile Arg Arg Ser Ser Cys Cys Leu Leu Ser Pro Asp Ala Asn Val
 85 90 95
 Lys Ala Ala Pro Gln Ser Arg Lys Ala Glu Asn Leu Gln Glu Asn Pro
 100 105 110
 Pro Val Ile Val Thr Arg Val Leu Gln Ala Leu Gly Thr Val Ala Val
 115 120 125
 Ala Leu Gly Ala Leu Gly Ala Ala Tyr Tyr Ile Thr Glu Ser Leu
 130 135 140

<210> 5681
 <211> 1402
 <212> DNA
 <213> Homo sapiens

<400> 5681

gggcggcctg gcagctggcg gcattgaggc ggaccgtcta gaggtccgtc tgaccgcggc
60
gtcgggacct gggttccggg catgagctga gagcaccacg ccgaggccac gagtatttca
120
tagacattga tggaagcaga aacaaaaact cttcccttg agaatgcac catcctttca
180
gagggctctc tgcaggaagg acaccgatta tggattggca acctggaccc caaaattacc
240
gaataccacc tcctcaagct cctccagaag tttggcaagg taaagcagtt tgacttcctc
300
ttccacaagt caggtgcttt ggagggacag cctcgaggct actgttttgt taactttgaa
360
actaagcagg aagcagagca agccatccag tgtctcaatg gcaagttggc cctgtccaag
420
aagctggtgg tgcgatggc acatgctcaa gtaaagagat atgatacaaa caagaatgat
480
aagattcttc caatcagtct cgagccatcc tcaagcactg agcctactca gtctaaccta
540
agtgtcactg caaagataaa agccattgaa gcaaaactga aaatgatggc ggaaaatcct
600
gatgcagagt atccagcagc gcctgtttat tcctacttta agccaccaga taaaaaagg
660
actactccat attctagaac agcatggaaa tctcgaagat gatgggtgtg aattactgta
720
gcagcaaaag caaattggct tccacaccta aaatcgtctg cctgtgtact ttgtagatgt
780
gaatgggtact attcaacgga gcacaatcac atgttagcat ttggtaacat aatgtttttg
840
gatgttctta tggatgtttc ttccctaaac tatgtatgga attgagcatc atccagaata
900
aatagcgttg tatcccaaat tgtgatttga accctgggat gctctaattg gctggttggg
960
ttggatttgt aactccagaa acattctata gtgtgccaga gcaaaaggca aatacacaaa
1020
atattattta aatcaggaaa ctaaaaatat taacatctat taaaaaattg agcatttttc
1080
tacgctcgtg tgtcttttac aacataaaga aaaagtaaaa ggcagggagg gaagtgagag
1140
acagatttta aatcatgttc agaactgttg ttccagaatt tactacggca atccctccaa
1200
ctggactgaa aaagagaaaag ttcttggcaa aaaggagctg attctttgaa caaatgttgt
1260
agtaatctgt ttaagaatta tgcttattgt ttcaaaatcc caactaggaa aacatggtgt
1320
atatcttaaa attgtttgtg ttgacaaaac tagaatcaaa tttaacattt tataccacat
1380
cacaagttct atttgggata tt
1402

<210> 5682

<211> 190

<212> PRT

<213> Homo sapiens

<400> 5682

```

Met Glu Ala Glu Thr Lys Thr Leu Pro Leu Glu Asn Ala Ser Ile Leu
 1           5           10           15
Ser Glu Gly Ser Leu Gln Glu Gly His Arg Leu Trp Ile Gly Asn Leu
 20           25           30
Asp Pro Lys Ile Thr Glu Tyr His Leu Leu Lys Leu Leu Gln Lys Phe
 35           40           45
Gly Lys Val Lys Gln Phe Asp Phe Leu Phe His Lys Ser Gly Ala Leu
 50           55           60
Glu Gly Gln Pro Arg Gly Tyr Cys Phe Val Asn Phe Glu Thr Lys Gln
 65           70           75           80
Glu Ala Glu Gln Ala Ile Gln Cys Leu Asn Gly Lys Leu Ala Leu Ser
 85           90           95
Lys Lys Leu Val Val Arg Trp Ala His Ala Gln Val Lys Arg Tyr Asp
100           105           110
His Asn Lys Asn Asp Lys Ile Leu Pro Ile Ser Leu Glu Pro Ser Ser
115           120           125
Ser Thr Glu Pro Thr Gln Ser Asn Leu Ser Val Thr Ala Lys Ile Lys
130           135           140
Ala Ile Glu Ala Lys Leu Lys Met Met Ala Glu Asn Pro Asp Ala Glu
145           150           155           160
Tyr Pro Ala Ala Pro Val Tyr Ser Tyr Phe Lys Pro Pro Asp Lys Lys
165           170           175
Arg Thr Thr Pro Tyr Ser Arg Thr Ala Trp Lys Ser Arg Arg
180           185           190

```

<210> 5683

<211> 328

<212> DNA

<213> Homo sapiens

<400> 5683

```

ggatccatgc gttgccctag ggaggcctca gctgtcaagc actgaccatc tctgcagaca
60
cgcagggctg acctgtactg gtgagtaagc attagccatg ggacgcacac aatccagcca
120
atgctttcag aaggcaccac atgtgatgca cagcctctat ttacatgtga ataattacac
180
tgctgctttc tgggttaaaag tagggaaata cagtgttcca gggcatagga atgggtgctct
240
gggtagaaaa gtttattttg ctggtgggag gcagggtttg ttaataaagc tttgaaatac
300
acaaatttca ttctggatgc tgatgctg
328

```

<210> 5684

<211> 103

<212> PRT

<213> Homo sapiens

<400> 5684

```

Met Lys Phe Val Tyr Phe Lys Ala Leu Leu Thr Lys Pro Ala Ser His

```

```

      1             5             10             15
Gln Gln Asn Lys Leu Phe Tyr Pro Glu His His Ser Tyr Ala Leu Glu
      20             25             30
His Cys Ile Ser Leu Leu Leu Thr Arg Lys Gln Gln Cys Asn Tyr Ser
      35             40             45
His Val Asn Arg Gly Cys Ala Ser His Val Val Pro Ser Glu Ser Ile
      50             55             60
Gly Trp Ile Val Cys Val Pro Trp Leu Met Leu Thr His Gln Tyr Arg
      65             70             75             80
Ser Ala Leu Arg Val Cys Arg Asp Gly Gln Cys Leu Thr Ala Glu Ala
      85             90             95
Ser Leu Gly Gln Arg Met Asp
      100

```

<210> 5685
 <211> 604
 <212> DNA
 <213> Homo sapiens

```

<400> 5685
ccatgcagcc gcgtgggtgg caagcgggtg gtgtgctatg acgacagatt cattgtgaag
60
ctggcctacg agtctgacgg gatcgtggtt tccaacgaca cataccgtga cctccaaggc
120
gagcggcagg agtggaagcg cttcatcgag gagcggctgc tcatgtactc cttcgtcaat
180
gacaagtatg ttccctccca gaggcctga cagacttggg gtccacaggg gaagccagag
240
gtgcccttgg caaggggtgga gctgggggct gggctctgcg gggcctgtg gccatgggag
300
gttgccgggtc ttggctccag gcagctttga gaggtagacg gatagctcac cacataggag
360
aatcagacc gggaccaggc aggctgtggg gtggagagag tggctaattt gggagataga
420
gccgtagcac ttatgagggg atgtatgtgg ttgatggttc caggtggcct ctctacgaac
480
caacatggca tctctcgagc agaggccatg ggccagtggg tgccgggctgc catccccga
540
cgacttcagg gagggagtgc ccctaaaggt gcccatgggc tgtggccctc tagaccgggg
600
atcc
604

```

<210> 5686
 <211> 69
 <212> PRT
 <213> Homo sapiens

```

<400> 5686
Pro Cys Ser Arg Val Gly Gly Lys Arg Val Val Cys Tyr Asp Asp Arg
1             5             10             15
Phe Ile Val Lys Leu Ala Tyr Glu Ser Asp Gly Ile Val Val Ser Asn
      20             25             30
Asp Thr Tyr Arg Asp Leu Gln Gly Glu Arg Gln Glu Trp Lys Arg Phe

```

35 40 45
 Ile Glu Glu Arg Leu Leu Met Tyr Ser Phe Val Asn Asp Lys Tyr Val
 50 55 60
 Pro Ser Gln Arg Pro
 65

<210> 5687
 <211> 328
 <212> DNA
 <213> Homo sapiens

<400> 5687
 actctctccc gaccgcgtgg tgcgggtaag ggtggtggtg atggtggtgg tggtagcgc
 60
 ccccggtctct gcatgcacgc ctgcgtgaac acccgggct cttcccggtg cacctgcccc
 120
 ggtggatccg aaactctggc tgacgggaag agctgtgaga atgtggatga atgtgtgggc
 180
 ctgcagccgg tgtgccccca ggggaccaca tgcatcaaca ccggtggaag cttccagtgt
 240
 gtcagccctg agtgccccga gggcagcggc aatgtgagct acgtgaagac gtctccattc
 300
 cagtgtgagc ggaaccctg ccccatgg
 328

<210> 5688
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 5688
 Thr Leu Ser Arg Pro Arg Gly Ala Gly Lys Gly Gly Gly Asp Gly Gly
 1 5 10 15
 Gly Gly Glu Arg Pro Arg Leu Cys Met His Ala Cys Val Asn Thr Pro
 20 25 30
 Gly Ser Ser Arg Cys Thr Cys Pro Gly Gly Ser Glu Thr Leu Ala Asp
 35 40 45
 Gly Lys Ser Cys Glu Asn Val Asp Glu Cys Val Gly Leu Gln Pro Val
 50 55 60
 Cys Pro Gln Gly Thr Thr Cys Ile Asn Thr Gly Gly Ser Phe Gln Cys
 65 70 75 80
 Val Ser Pro Glu Cys Pro Glu Gly Ser Gly Asn Val Ser Tyr Val Lys
 85 90 95
 Thr Ser Pro Phe Gln Cys Glu Arg Asn Pro Cys Pro Met
 100 105

<210> 5689
 <211> 1897
 <212> DNA
 <213> Homo sapiens

<400> 5689
 nagtactaca aaatgtctgg cacatgacag atgtcatga taaaatgttt gacagttgaa
 60

tgaacaatca gaatcataga agagtgtgag cactggtcct ttgtcttcca ggtgggacag
120
tgtgtggtgg tcttcagcca ggctcctagt gggagagccc cactcagccc cagtttgaac
180
tctcgcccat cacctatcag tgccactncc tccagctctc gttcctgaaa cccgagagta
240
ccgctctcag tctccagtaa gaagcatgga tgaagctcct tgtgttaacg gccgctgggg
300
aacactgaga cccagggctc aaaggcagac tcctcagggt cccgggaagg gagcctttcc
360
ccagccagag gagacggctc tcctatcctc aatgggtggga gtttgtctcc aggaacggca
420
gctgtgggtg gctcttcttt ggacagtcct gtacaggcca tatctccaag tactccatct
480
gctgctgaag gatacgacct gaaaatagga ctttctttgg ccccccgcg aggatcaacc
540
agatcagaaa gatctgagat taggatccat agatctgaat tgggatctaa acccgcttcc
600
agtagtaatc ccatggatgg catggacaat aggacagttg ggggaagtat gagacacct
660
cctgaacaga caaatggtgt gcatacccca cctcacgtgg ccagtgcctt tgcagggggc
720
gtctccccag gtgccctgcg tcggagtctg gaagccatca aagcgatgtc ctccaaaggc
780
ccctcggcct ctgcagcact aagtcctcct cttgggtctt ctccaggctc tcctgggagc
840
cagagtttga gcagtggaga aacagtgcc atccctcgcc cagggcctgc ccaaggagat
900
ggacattcct tacctcccat tgctcgccgc ctgggccacc accctccaca gtccctaaat
960
gttggcaaac ccctatacca gagtatgaac tgcaagccca tgcagatgta cgtgctggac
1020
attaaagaca ccaaggagaa ggggggggtc aaatggaaag tatttaatag cagttctgtg
1080
gttggacctc ctgaaaccag cctgcatacc gtggtacaag gcaggggtga actcatcata
1140
tttggaggac tcatggacaa gaaacagaat gtgaagtact atccaaaaac aaacgccttg
1200
tactttgtac gagcaaagag ataatgtgtt ctaaaccctt ttcttttct gtggctttta
1260
atttgaatt ttccagtgtg taagcatttg gactgagaat tgggaaaaca aaattactcc
1320
cagaagccaa aactctttta ttcccaaccg aagtcactcc aggetgggat caaatctcca
1380
ttaagaaaaa aaattatata taaatatata tatatatatt atatagccaa ctctgttgac
1440
aaaaaaagg agagatttcc atcctgggtc agataaagtt gttgctgtgt tttaacaggg
1500
gctgggctgc ctttttctac cttgctggta actagaccaa gaagttagag aatagactaa
1560
catcagtaac ttcccaaaag aaactgaaga gcccctgta aatctttatg tggccttctt
1620
ggagttaaaa aatgaaaggg catatgtaag ttgcaaagggt ggagggtttt agactctcat
1680

gcttcagggtg ctgtcgggggt aaaagtaact gtttttcccc ttctcttaaa accacagagg
 1740
 acctgtgaca gctctgcaga aatgccagtg cctggccccc tcttgccctt tatggctgag
 1800
 gaaagttacc caacaaagga ttttattcca catttgtgtg ccgggtcatt gtgaaataat
 1860
 gtttatgcag ccaacatctg aaaaaaaaaa aaaaaaa
 1897

<210> 5690
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 5690
 Thr Ile Arg Ile Ile Glu Glu Cys Glu His Trp Ser Phe Val Phe Gln
 1 5 10 15
 Val Gly Gln Cys Val Val Val Phe Ser Gln Ala Pro Ser Gly Arg Ala
 20 25 30
 Pro Leu Ser Pro Ser Leu Asn Ser Arg Pro Ser Pro Ile Ser Ala Thr
 35 40 45
 Xaa Ser Ser Ser Arg Ser
 50

<210> 5691
 <211> 1227
 <212> DNA
 <213> Homo sapiens

<400> 5691
 aagcggaaaa acaattgcc a tggcaaccac attgagatgc aggccatggc agagatgtac
 60
 aaccgtcctg tggaggtgta ccagtacagc acagaaccca tcaacacatt ccatgggata
 120
 catcaaaacg aggacgaacc cattcgtgtt agctaccatc ggaatatcca ctataattca
 180
 gtggtgaatc ctaacaaggc caccattggt gtggggctgg gctgccatca ttcaaaccag
 240
 ggtttgcaga gcagtctctg atgaagaatg ccataaaaac atcggaggag tcatggattg
 300
 aacagcagat gctagaagac aagaaacggg ccacagactg ggaggccaca aatgaagcca
 360
 tcgaggagca ggtggctcgg gaatcctacc tgcagtgggt gcgggatcag gagaaacagg
 420
 ctgcgcaggc ccgaggcccc agccagcccc ggaaagccag cgccacatgc agttcggcca
 480
 cagcagcagc ctccagtggc ctggaggagt ggactagccg gtccccgcgg cagcggagtt
 540
 cagcctcgtc acctgagcac cctgagctgc atgctgaatt gggcatgaag cccccttccc
 600
 caggcactgt tttagctctt gccaaacctc cttcgccctg tgcgccaggc acaagcagtc
 660
 agttctcggc agggggccgac cggggcaactt ccccccttgt gtccctctac cctgctttgg
 720

agtgccgggc cctcattcag cagatgtccc cctctgcctt tggctctgaat gactgggatg
 780
 atgatgagat cctagcttcg gtgctggcag tgtcccaaca ggaataccta gacagtatga
 840
 agaaaaacaa agtgcacaga gacccgcccc cagacaagag ttgatggaga cccagggatt
 900
 ggacaccatc tcccaacccc agggattcgg gcaagggtgc cgaagataga caagaggcac
 960
 acagagacag accaactggc agccaggcag cccagagga gagagacatt cagacagagg
 1020
 aaagtctccc tgccctcat tccttccaag atgagaaaaa cttgccgcca cccccgaca
 1080
 ctgatgccag ggaggtggga ggaagaagtg ggaaatttcc cttcccagta cccccaagaa
 1140
 cgtctgagcc ttcaatgttg aattttttct ttattaaaat tacttttate ttataaaatc
 1200
 aactaatcaa aaatgaaaaa aaaaaaa
 1227

<210> 5692

<211> 86

<212> PRT

<213> Homo sapiens

<400> 5692

Lys	Arg	Lys	Asn	Asn	Cys	His	Gly	Asn	His	Ile	Glu	Met	Gln	Ala	Met
1			5					10					15		
Ala	Glu	Met	Tyr	Asn	Arg	Pro	Val	Glu	Val	Tyr	Gln	Tyr	Ser	Thr	Glu
			20					25					30		
Pro	Ile	Asn	Thr	Phe	His	Gly	Ile	His	Gln	Asn	Glu	Asp	Glu	Pro	Ile
			35				40					45			
Arg	Val	Ser	Tyr	His	Arg	Asn	Ile	His	Tyr	Asn	Ser	Val	Val	Asn	Pro
			50				55				60				
Asn	Lys	Ala	Thr	Ile	Gly	Val	Gly	Leu	Gly	Cys	His	His	Ser	Asn	Gln
65					70				75					80	
Gly	Leu	Gln	Ser	Ser	Leu										
					85										

<210> 5693

<211> 389

<212> DNA

<213> Homo sapiens

<400> 5693

nacgcgtgtg ggataccctc tcgcggggac agccaggcag aaagacgctg ctctctctcg
 60
 gacactgggg cacctctgcg cctgtcccaa ggccacgctg gctctcttca ggcccatggc
 120
 tccaaccccg cagggcccct cgtcggggcg tcccaactta gtcgtcccct gacgcgccct
 180
 ctggggccctc ccgggttggt gagctgacgg cagcttcccc ccacaggtgc ctctgagcct
 240
 cggaacatga tctacatgag ccgcttggtt atctggggcg agggcacacc cttccggaac
 300

tttgaggagt tcctgcacgc catcgagaag aggggcgttg gcgccatgga gatcgtggcc
 360
 atggacatga aggtcagcgg gcatgtaca
 389

<210> 5694
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 5694
 Arg Gln Leu Pro Pro Thr Gly Ala Ser Glu Pro Arg Asn Met Ile Tyr
 1 5 10 15
 Met Ser Arg Leu Gly Ile Trp Gly Glu Gly Thr Pro Phe Arg Asn Phe
 20 25 30
 Glu Glu Phe Leu His Ala Ile Glu Lys Arg Gly Val Gly Ala Met Glu
 35 40 45
 Ile Val Ala Met Asp Met Lys Val Ser Gly His Val
 50 55 60

<210> 5695
 <211> 1417
 <212> DNA
 <213> Homo sapiens

<400> 5695
 gtggccctcc accggtcatt gaagcctcaa ggtcaggtagg gtgagcagga ggaggctggg
 60
 gccttgccggc aagccctaac cttttccctg ttggagcagc ccccggttga ggcagaagag
 120
 cccccagata gggggactga tggcaaggcc cagctggtagg tgcactcggc ctttgagcag
 180
 gatgtggagg agctggaccg ggcgctcagg gctgccttagg aggtccacgt ccaggaggag
 240
 acggtggggc cctggcgccg cacactgcct gcagagctgc gtgctcgcct ggagcggtagc
 300
 catggtgtga gtgttgccct gcgtggtgac tgcaccatcc tccgtggctt cggggccac
 360
 cctgcccgtg ctgcccgcca cttggtggca cttctggctg gcccctggga tcagagtttg
 420
 gcctttccct tggcagcttc aggcctacc ttggcggggc agacgctgaa ggggccctgg
 480
 aacaacctgg agcgtctggc agagaacacc ggggagttcc aggaggtggg gcgggccttc
 540
 tacgacaccc tggacgctgc ccgagcagc atccgcgtcg ttcgtgtgga gcgcgtgtcg
 600
 caccgctgc tgcagcagca gtatgagctg taccgggagc gcctgctgca gcgatgagag
 660
 cggcgcccgg tggagcagg gctgtaccac ggcacgacgg caccggcagt gcctgacatc
 720
 tgcgcccacg gcttcaaccg cagcttctgc ggccgcaacg ccacggtcta cggaaggggc
 780
 gtgtatttcg ccaggcgccg ctccctgtcg gtgcaggacc gctactcgcc ccccaacgcc
 840

gatggccata aggcggtgtt cgtggcacgg gtgctgactg gcgactacgg gcagggccgc
 900
 cgcggtctgc gggcgccccc tctgcggggt cctggccacg tgctcctgcg ctacgacagc
 960
 gccgtggact gcatctgcca gccagcacc ttcgtcatct tccacgacac ccaggcgctg
 1020
 cccacccacc tcatcacctg cgagcacgtg ccccgcgctt ccccgacga cccctctggg
 1080
 ctcccgggcc gctccccaga cacttaaccg aagggggccac cctctggcct cctgcttccc
 1140
 aggctccag ctccgcacag gctgatgtc cccgccccca actgtggccg cctgagctgt
 1200
 ccccggggac gccctgcat ccctctgcgg gctccagaag gcggtgtggg ggatggcggt
 1260
 cagcagcggc cgaggggggc cgggctaggt cccagcctgg gccgacccca ccaccagggg
 1320
 tcagcagagc ccaggagcga caccgcccgc ccgcccgtcc cagacctcgc ccgagtcggc
 1380
 tctgtgtttt gaataaacgt gaacgtgaac ccagaaa
 1417

<210> 5696

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5696

Val	Ala	Leu	His	Arg	Ser	Leu	Lys	Pro	Gln	Gly	Gln	Val	Gly	Glu	Gln
1			5					10						15	
Glu	Glu	Ala	Gly	Ala	Leu	Arg	Gln	Ala	Leu	Thr	Phe	Ser	Leu	Leu	Glu
			20				25					30			
Gln	Pro	Pro	Leu	Glu	Ala	Glu	Glu	Pro	Pro	Asp	Arg	Gly	Thr	Asp	Gly
		35				40					45				
Lys	Ala	Gln	Leu	Val	Val	His	Ser	Ala	Phe	Glu	Gln	Asp	Val	Glu	Glu
	50					55					60				
Leu	Asp	Arg	Ala	Leu	Arg	Ala	Ala	Leu	Glu	Val	His	Val	Gln	Glu	Glu
65					70				75					80	
Thr	Val	Gly	Pro	Trp	Arg	Arg	Thr	Leu	Pro	Ala	Glu	Leu	Arg	Ala	Arg
			85					90					95		
Leu	Glu	Arg	Cys	His	Gly	Val	Ser	Val	Ala	Leu	Arg	Gly	Asp	Cys	Thr
			100					105					110		
Ile	Leu	Arg	Gly	Phe	Gly	Ala	His	Pro	Ala	Arg	Ala	Ala	Arg	His	Leu
			115				120						125		
Val	Ala	Leu	Leu	Ala	Gly	Pro	Trp	Asp	Gln	Ser	Leu	Ala	Phe	Pro	Leu
	130					135					140				
Ala	Ala	Ser	Gly	Pro	Thr	Leu	Ala	Gly	Gln	Thr	Leu	Lys	Gly	Pro	Trp
145					150				155					160	
Asn	Asn	Leu	Glu	Arg	Leu	Ala	Glu	Asn	Thr	Gly	Glu	Phe	Gln	Glu	Val
			165					170						175	
Val	Arg	Ala	Phe	Tyr	Asp	Thr	Leu	Asp	Ala	Ala	Arg	Ser	Ser	Ile	Arg
			180					185					190		
Val	Val	Arg	Val	Glu	Arg	Val	Ser	His	Pro	Leu	Leu	Gln	Gln	Gln	Tyr
			195				200					205			
Glu	Leu	Tyr	Arg	Glu	Arg	Leu	Leu	Gln	Arg	Cys	Glu	Arg	Arg	Pro	Val

210	215	220
Glu Gln Val Leu Tyr His Gly Thr Thr Ala Pro Ala Val Pro Asp Ile		
225	230	235
Cys Ala His Gly Phe Asn Arg Ser Phe Cys Gly Arg Asn Ala Thr Val		240
	245	250
Tyr Gly Lys Gly Val Tyr Phe Ala Arg Arg Ala Ser Leu Ser Val Gln		255
	260	265
Asp Arg Tyr Ser Pro Pro Asn Ala Asp Gly His Lys Ala Val Phe Val		270
	275	280
Ala Arg Val Leu Thr Gly Asp Tyr Gly Gln Gly Arg Arg Gly Leu Arg		285
	290	295
Ala Pro Pro Leu Arg Gly Pro Gly His Val Leu Leu Arg Tyr Asp Ser		300
305	310	315
Ala Val Asp Cys Ile Cys Gln Pro Ser Ile Phe Val Ile Phe His Asp		320
	325	330
Thr Gln Ala Leu Pro Thr His Leu Ile Thr Cys Glu His Val Pro Arg		335
	340	345
Ala Ser Pro Asp Asp Pro Ser Gly Leu Pro Gly Arg Ser Pro Asp Thr		350
	355	360

<210> 5697

<211> 3362

<212> DNA

<213> Homo sapiens

<400> 5697

gtatccaatt caaagaatac aaaaggggtat acagagaagt tggcctccct cctaccctgt
 60
 ccttcagcca ccagtgatga tgattcacgg ttcttcactg caccagcca agggtagaca
 120
 tgggtcccaa aacctccgtg cctgaggaaa ggagcacgtt ttcctatgtg tgcaaagggtg
 180
 ccatgtgcgc ttgcaggttt gaaatgaggc gagtcttctt caagaagtca ggagaggggg
 240
 agtcttccaa tgaattcatc tttccttccc cccaaccatt cccctcttgg cttttctaga
 300
 atgttcgtgg catcagagag aaagatgaga gctcaccagg tgctcacctt cctcctgctc
 360
 ttcgtgatca cctcgggtggc ctctgaaaac gccagcacat cccgaggctg tgggctggac
 420
 ctccctccctc agtacgtgtc cctgtgcgac ctggacgcca tctggggcat tgtgggtggag
 480
 gcggtggccg gggcggggcgc cctgatcaca ctgctcctga tgctcatcct cctgggtgcgg
 540
 ctgcccttca tcaaggagaa ggagaagaag agccctgtgg gcctccactt tctgttcttc
 600
 ctgggggaccc tgggcctctt tgggctgacg tttgccttca tcatccagga ggacgagacc
 660
 atctgctctg ttgcgcgctt cctctggggc gtcctctttg cgctctgctt ctccctgctg
 720
 ctgagccagg catggcgcgt gcggaggctg gtgcggcatg gcacggggccc cgcgggctgg
 780
 cagctgggtg gcctggcgct gtgcctgatg ctggtgcaag tcatcatcgc tgtggagtgg
 840

ctggtgctca ccgtgctgcy tgacacaagg ccagcctgcy cctacgagcc catggacttt
900
gtgatggccc tcatctacga catggtactg cttgtggtca ccctggggct ggccctcttc
960
actctgtgcy gcaagttaa gaggtggaag ctgaacgggg ccttcctcct catcacagcc
1020
ttcctctctg tgctcatctg ggtggcctgg atgaccatgt acctcttcgg caatgtcaag
1080
ctgcagcagg gggatgcctg gaacgacccc accttgacca tcacgctggc ggccagcggc
1140
tggtctcttc tcatcttcca cgccatccct gagatccact gcacccttct gccagccctg
1200
caggagaaca cgcccaacta cttcgacacg tcgcagccca ggatgcggga gacggccttc
1260
gaggaggacg tgcagctgcc gcgggcctat atggagaaca aggccttctc catggatgaa
1320
cacaatgcag ctctccgaac agcaggattt cccaacggca gcttgggaaa aagaccagt
1380
ggcagcttgg ggaaaagacc cagcgtccg tttagaagca acgtgtatca gccaaactgag
1440
atggccgtcg tgctcaacgg tgggaccatc ccaactgctc cgccaagtca cacaggaaga
1500
cacctttggt gaaagacttt aagttccaga gaatcagaat ttctcttacc gatttgctc
1560
cctggctgtg tctttcttga gggagaaatc ggtaacagtt gccgaaccag gccgcctcac
1620
agccaggaaa tttggaaatc ctagccaagg ggatttcgtg taaatgtgaa cactgacgaa
1680aacaccgact gcccggccct cccctgccac acacacagac acgtaatacc 1740
agaccaacct caatccccgc aaactaaagc aaagctaatt gcaaatagta ttaggctcac
1800
tgaaaaatgt ggctgggaag actgtttcat cctctggggg tagaacagaa ccaaattcac
1860
agctggtggg ccagactggt gttggttggg ggtggggggc tccactctt atcacctctc
1920
cccagcaagt gctggacccc aggtagcctc ttggagatga ccgttgcggt gaggacaaat
1980
ggggactttg ccaccggctt gcctggtggt ttgcacattt caggggggctc aggagagtta
2040
aggagggtgt ggggtgggatt ccaagggtgag gcccaactga atcgtggggg gagctttata
2100
gccagtagag gtggagggac cctggcatgt gccaaagaag aggccctctg ggtgatgaag
2160
tgaccatcac atttggaaag tgatcaacca ctgttccttc tatggggctc ttgctctagt
2220
gtctatggtg agaacacagg ccccgccctc tccctttag agccatagaa atattctggc
2280
ttggggcagc agtcccttct tcccttgatc atctcgccct gttcctacac ttacgggtgt
2340
atctccaaat cctctcccaa ttttatcccc ttattcattt caagagctcc aatggggctc
2400
ccagctgaaa gcccctccgg gaggcagggt ggaaggcagg caccacggca ggttttccgc
2460
gatgatgtca cctagcaggg cttcaggggt tccactagg atgcagagat gacctctcgc
2520

tgcctcaciaa gcagtgcac ctcgggtcct ttcggttgc atggtgaaaa ttcctggatg
 2580
 gaatggatca catgagggtt tcttggtgct tttggagggt gtgggggata ttttgttttg
 2640
 gtttttctgc aggttccatg aaaacagccc ttttccaagc ccattgtttc tgtcatgggt
 2700
 tccatctgtc ctgagcaagt cattcctttg ttatttagca tttcgaacat ctcggccatt
 2760
 caaagccccc atgttctctg cactgttttg ccagcataac ctctagcatc gattcaaagc
 2820
 agagttttta cctgacggca tggaatgtat aaatgagggt gggtccttct gcagatactc
 2880
 taatcactac attgcttttt ctataaaact acccataagc ctttaacctt taaagaaaaa
 2940
 tgaaaaaggt tagtgtttg gggccggggg aggactgacc gcttcataag ccagtacgtc
 3000
 tgagctgagt atgtttcaat aaaccttttg atattttctca aggccttagt ctctgctgtc
 3060
 tcccctcccc accccatcct tgcaaagcac tggggaaagt aaggccaatc tggccctccc
 3120
 tgtgtgacct gccttcgagt tttccttaac agttagtaca tttccttggt ttaccacgca
 3180
 cggggaagaa aacgcatggc ccagaaatgc cacccccacc tgacctcccc ggaagcacc
 3240
 cgcctctgcc cagagcatgt gcttgcttct agagaatccc gttccagtca ttgcgtggac
 3300
 agaaaaacgta agagtccctgg ggaggggtgg gagggaatga agctaggacc tgggggtcggg
 3360
 gt
 3362

<210> 5698

<211> 403

<212> PRT

<213> Homo sapiens

<400> 5698

Met	Phe	Val	Ala	Ser	Glu	Arg	Lys	Met	Arg	Ala	His	Gln	Val	Leu	Thr
1				5				10						15	
Phe	Leu	Leu	Leu	Phe	Val	Ile	Thr	Ser	Val	Ala	Ser	Glu	Asn	Ala	Ser
			20					25					30		
Thr	Ser	Arg	Gly	Cys	Gly	Leu	Asp	Leu	Leu	Pro	Gln	Tyr	Val	Ser	Leu
		35					40					45			
Cys	Asp	Leu	Asp	Ala	Ile	Trp	Gly	Ile	Val	Val	Glu	Ala	Val	Ala	Gly
	50				55					60					
Ala	Gly	Ala	Leu	Ile	Thr	Leu	Leu	Leu	Met	Leu	Ile	Leu	Leu	Val	Arg
65					70				75					80	
Leu	Pro	Phe	Ile	Lys	Glu	Lys	Glu	Lys	Lys	Ser	Pro	Val	Gly	Leu	His
			85					90						95	
Phe	Leu	Phe	Leu	Leu	Gly	Thr	Leu	Gly	Leu	Phe	Gly	Leu	Thr	Phe	Ala
			100					105					110		
Phe	Ile	Ile	Gln	Glu	Asp	Glu	Thr	Ile	Cys	Ser	Val	Arg	Arg	Phe	Leu
		115				120						125			
Trp	Gly	Val	Leu	Phe	Ala	Leu	Cys	Phe	Ser	Cys	Leu	Leu	Ser	Gln	Ala


```

      130              135              140
Trp Arg Val Arg Arg Leu Val Arg His Gly Thr Gly Pro Ala Gly Trp
145              150              155              160
Gln Leu Val Gly Leu Ala Leu Cys Leu Met Leu Val Gln Val Ile Ile
      165              170              175
Ala Val Glu Trp Leu Val Leu Thr Val Leu Arg Asp Thr Arg Pro Ala
      180              185              190
Cys Ala Tyr Glu Pro Met Asp Phe Val Met Ala Leu Ile Tyr Asp Met
      195              200              205
Val Leu Leu Val Val Thr Leu Gly Leu Ala Leu Phe Thr Leu Cys Gly
      210              215              220
Lys Phe Lys Arg Trp Lys Leu Asn Gly Ala Phe Leu Leu Ile Thr Ala
225              230              235              240
Phe Leu Ser Val Leu Ile Trp Val Ala Trp Met Thr Met Tyr Leu Phe
      245              250              255
Gly Asn Val Lys Leu Gln Gln Gly Asp Ala Trp Asn Asp Pro Thr Leu
      260              265              270
Ala Ile Thr Leu Ala Ala Ser Gly Trp Val Phe Val Ile Phe His Ala
      275              280              285
Ile Pro Glu Ile His Cys Thr Leu Leu Pro Ala Leu Gln Glu Asn Thr
      290              295              300
Pro Asn Tyr Phe Asp Thr Ser Gln Pro Arg Met Arg Glu Thr Ala Phe
305              310              315              320
Glu Glu Asp Val Gln Leu Pro Arg Ala Tyr Met Glu Asn Lys Ala Phe
      325              330              335
Ser Met Asp Glu His Asn Ala Ala Leu Arg Thr Ala Gly Phe Pro Asn
      340              345              350
Gly Ser Leu Gly Lys Arg Pro Ser Gly Ser Leu Gly Lys Arg Pro Ser
      355              360              365
Ala Pro Phe Arg Ser Asn Val Tyr Gln Pro Thr Glu Met Ala Val Val
      370              375              380
Leu Asn Gly Gly Thr Ile Pro Thr Ala Pro Pro Ser His Thr Gly Arg
385              390              395              400
His Leu Trp

```

<210> 5699

<211> 1565

<212> DNA

<213> Homo sapiens

<400> 5699

```

tttttttttt tttttttttt tttttttttt ttttttcata gtgaaaccat tttctagaaa
60
atcaaatatt ttattttcat taaaaaaaaa cttgaataa taggaatcat tttacacatt
120
aatggttgct ctttaaaagt tagaatctca agagatacca aaagcactta agagttacca
180
ccacattttg cccaagttct aaggaaagtt ctgaaactta gtggtggtgt gtttgactc
240
agcaagctcc agacagtctg agttgctcat tccatgaaca gaagcttgaa aatgccctta
300
cagttgagat ataaacgagg gaagaggtga agctttcagg aagccagaga gccctgccc
360

```

gtcagggtttc ctgaggaagg caggggtgct ctatgctcat cagtcattca agcttctcag
 420
 gaaatgtgcc catcatggga acagcagcta tcttccaagc ttaaaaatta tgaatcccag
 480
 gaagttaaag cccaaccagc caaccacctt cacatccttc tcatactagt agagtcattc
 540
 aaaacagcaa gtggtgcttc tgaggcagcc tcaggaaggc ctttgggtgg ctattctaga
 600
 ggtgaacata ctggaaaggc ttttacctaa agcattttca gttgaaatga aaaaagaagg
 660
 aaagctccaa aagtcagttt caaattcttt cagtgtctgt cccagagaag tccgtgtgca
 720
 aaggtgtgat gttctgggtca taagcggcat actcagaggc gccggtactg gccagcttga
 780
 gctgtctggc agcatgggtc agctggaatg cagcatcagg gtgggctgtc tcaggcagca
 840
 gtgtgcattc cctttccagc atgtcagcca cccctttcag caggtccagg aaaccaaagg
 900
 ctgagcggc ctttcgcaaa cggttcagct ccttatagaa tgtctgtgtt ttttcaggta
 960
 gtttccttgc atttcttaaa atcttctgta catctgtctg caggccgctg ggtttgatcc
 1020
 agacagtcac attctgggca taactgcgtt tgtttttggg ctgtaggggg aatggactct
 1080
 tattgtcatc ctgcataaa ggggttttct tagcatctga aataggaccc aactgtgcca
 1140
 ttttccttag ccatgggaga ggttctgggc caggctcaaa gagagacatc atgaggtttg
 1200
 atttcttctt gctgtcagct tgggagtaga gcattccatg ccattcagga cctaattgaa
 1260
 caatcgctac cattccttcc acttttaggc taccatggag caggacacaa aagttgggta
 1320
 ttttgcttgc aatctgattg gctgaattct catcttcatt gtcacagtg atgccagcac
 1380
 ccacctcatc accttctttg ttaagtgcta tgggcaagac cagatgcctg gacagaactg
 1440
 ggggacttga aatatcagct atatcaataa atcccactat ttccaaatct gtgttaatga
 1500
 ctttagggat aggatcaatt tcttcatcta caacaaaagg ttctggcctg gggaagactt
 1560
 gtacc
 1565

<210> 5700

<211> 197

<212> PRT

<213> Homo sapiens

<400> 5700

Met	Val	Ala	Ile	Val	Gln	Leu	Gly	Pro	Glu	Trp	His	Gly	Met	Leu	Tyr
1				5					10				15		
Ser	Gln	Ala	Asp	Ser	Lys	Lys	Lys	Ser	Asn	Leu	Met	Met	Ser	Leu	Phe
			20					25					30		
Glu	Pro	Gly	Pro	Glu	Pro	Leu	Pro	Trp	Leu	Gly	Lys	Met	Ala	Gln	Leu

35					40					45					
Gly	Pro	Ile	Ser	Asp	Ala	Lys	Glu	Asn	Pro	Tyr	Gly	Glu	Asp	Asp	Asn
50					55					60					
Lys	Ser	Pro	Phe	Pro	Leu	Gln	Pro	Lys	Asn	Lys	Arg	Ser	Tyr	Ala	Gln
65					70					75					80
Asn	Val	Thr	Val	Trp	Ile	Lys	Pro	Ser	Gly	Leu	Gln	Thr	Asp	Val	Gln
85					90					95					
Lys	Ile	Leu	Arg	Asn	Ala	Arg	Lys	Leu	Pro	Glu	Lys	Thr	Gln	Thr	Phe
100					105					110					
Tyr	Lys	Glu	Leu	Asn	Arg	Leu	Arg	Lys	Ala	Ala	Leu	Ala	Phe	Gly	Phe
115					120					125					
Leu	Asp	Leu	Leu	Lys	Gly	Val	Ala	Asp	Met	Leu	Glu	Arg	Glu	Cys	Thr
130					135					140					
Leu	Leu	Pro	Glu	Thr	Ala	His	Pro	Asp	Ala	Ala	Phe	Gln	Leu	Thr	His
145					150					155					160
Ala	Ala	Gln	Gln	Leu	Lys	Leu	Ala	Ser	Thr	Gly	Thr	Ser	Glu	Tyr	Ala
165					170					175					
Ala	Tyr	Asp	Gln	Asn	Ile	Thr	Pro	Leu	His	Thr	Asp	Phe	Ser	Gly	Ser
180					185					190					
Ser	Thr	Glu	Arg	Ile											
195															

<210> 5701

<211> 1885

<212> DNA

<213> Homo sapiens

<400> 5701

gccttgcaca tggagatgct tagctgaggg ggtggctttg ttagactatt tgcaggtcgt
60

gagatagagc ctgagatggg ggactgggccc cctgcctggg ggattgggtc gtgacctgtg
120

tggagcccca cactgagctg cagtgggtgg ggagggtggt ttacaggggt gctctgtgca
180

gcccctctga ttttcccctg ggagtccag gtccagggga aggaggacag tggcccaggc
240

210
cacacagctc actgggcggc tctcactccc ccagggtctg ctgctggcgg gatggacacc
300

ctggaggagg tgacttgggc caatgggagc acagcgctac cccacccctt ggcaccaaac
360

atcagtgtgc ctcatcgctg cctgctgctg ctctacgaag acattggcac ctccagggtc

cggtactggg acctcttgct gctcatcccc aatgtgctct tcctcatctt cctgctctgg

aagcttccat ctgctcgggc gaagatccgc atcacctcca gccccatttt tatcaccttc

tacatcctgg tgtttgtggt ggcgctggtg ggcattgcc gggcctggt atccatgacg
600

gtgagcacct cgaacgctgc aactgttgct gataagatcc tgtgggagat caccgcttc
650

ttcctgctgg ccacgagct gagtgtgatc atcctgggccc tggcctttgg ccacctggag

720
agtaagtcca gcatcaagcg ggtgctggcc atcaccacag tgctgtccct ggctactct
780

gtcacccagg ggaccctgga gatcctgtac cctgatgccc atctctcagc tgaggacttt
 840
 aatatctatg gccatggggg ccgccagttc tggctggtca gctcctgctt cttcttcctg
 900
 gtctactctc tgggtggtcat ccttcccaag accccgctga aggagcgcac ctccctgcct
 960
 tctcggagga gcttctacgt gtatgcgggc atcctggcac tgctcaacct actgcagggg
 1020
 ctggggagtg tgctgctgtg ctctgacatc atcgaggggc tctgctgtgt agatgccaca
 1080
 accttctgt acttcagctt ctctgctccg ctcatctacg tggctttcct ccggggcttc
 1140
 ttcggctcgg agcccaagat cctcttcntc ctacaaatgc caagtggacg agacagagga
 1200
 gccagatgta cacctacccc agccctacgc tgtggcccgg cgggagggcc tggaggctgc
 1260
 aggggctgct ggggcctcag ctgccagcta ctcgagcacg cagttcgact ctgccggcgg
 1320
 ggtggcctac ctggatgaca tcgcttccat gccctgccac actggcagca tcaacagcac
 1380
 agacagcgag cgctggaagg ccatcaatgc ctgagggcag ctgccagggc ctgtggagga
 1440
 caggccagag aggaggccag caggcccaga gtccccaggg gaggaggacc aggtcaaggg
 1500
 acgttctgtg ggcagtagcc ctgtgtggcc ctgttccac catgagtctg gaggccccac
 1560
 ctccctgggg ctcccaatcc cctttgccat ctctgctctc actggggacc ctctccct
 1620
 tcccacctgc tctcactg ctcatgaca tggcccaggc tttccttcca gggccatgct
 1680
 tggcaagggt ggctgagggc accctccttc tctgcacct tggcacgagg gcagggctgg
 1740
 ctctcccaat gcctccatcc catccccatg gtgctttggc ctctcaaag catccacat
 1800
 ggtggatgga ctgaagtgtg tatattttct tgatctattt tttaataaaa aggaaaagga
 1860
 gcagaaaaaa aaaaaaaaag ttttg
 1885

<210> 5702

<211> 348

<212> PRT

<213> Homo sapiens

<400> 5702

Met Asp Thr Leu Glu Glu Val Thr Trp Ala Asn Gly Ser Thr Ala Leu
 1 5 10 15
 Pro Pro Pro Leu Ala Pro Asn Ile Ser Val Pro His Arg Cys Leu Leu
 20 25 30
 Leu Leu Tyr Glu Asp Ile Gly Thr Ser Arg Val Arg Tyr Trp Asp Leu
 35 40 45
 Leu Leu Leu Ile Pro Asn Val Leu Phe Leu Ile Phe Leu Leu Trp Lys
 50 55 60
 Leu Pro Ser Ala Arg Ala Lys Ile Arg Ile Thr Ser Ser Pro Ile Phe

```

65          70          75          80
Ile Thr Phe Tyr Ile Leu Val Phe Val Val Ala Leu Val Gly Ile Ala
          85          90          95
Arg Ala Val Val Ser Met Thr Val Ser Thr Ser Asn Ala Ala Thr Val
          100          105          110
Ala Asp Lys Ile Leu Trp Glu Ile Thr Arg Phe Phe Leu Leu Ala Ile
          115          120          125
Glu Leu Ser Val Ile Ile Leu Gly Leu Ala Phe Gly His Leu Glu Ser
          130          135          140
Lys Ser Ser Ile Lys Arg Val Leu Ala Ile Thr Thr Val Leu Ser Leu
          145          150          155          160
Ala Tyr Ser Val Thr Gln Gly Thr Leu Glu Ile Leu Tyr Pro Asp Ala
          165          170          175
His Leu Ser Ala Glu Asp Phe Asn Ile Tyr Gly His Gly Gly Arg Gln
          180          185          190
Phe Trp Leu Val Ser Ser Cys Phe Phe Phe Leu Val Tyr Ser Leu Val
          195          200          205
Val Ile Leu Pro Lys Thr Pro Leu Lys Glu Arg Ile Ser Leu Pro Ser
          210          215          220
Arg Arg Ser Phe Tyr Val Tyr Ala Gly Ile Leu Ala Leu Leu Asn Leu
          225          230          235          240
Leu Gln Gly Leu Gly Ser Val Leu Leu Cys Phe Asp Ile Ile Glu Gly
          245          250          255
Leu Cys Cys Val Asp Ala Thr Thr Phe Leu Tyr Phe Ser Phe Phe Ala
          260          265          270
Pro Leu Ile Tyr Val Ala Phe Leu Arg Gly Phe Phe Gly Ser Glu Pro
          275          280          285
Lys Ile Leu Phe Xaa Leu Gln Met Pro Ser Gly Arg Asp Arg Gly Ala
          290          295          300
Arg Cys Thr Pro Thr Pro Ala Leu Arg Cys Gly Pro Ala Gly Gly Pro
          305          310          315          320
Gly Gly Cys Arg Gly Cys Trp Gly Leu Ser Cys Gln Leu Leu Glu His
          325          330          335
Ala Val Arg Leu Cys Arg Arg Gly Gly Leu Pro Gly
          340          345

```

<210> 5703

<211> 1496

<212> DNA

<213> Homo sapiens

<400> 5703

```

nggctcacca cacggcaagg tgcccgttc caagctgacc ccaccagcac tcagacacgc
60
atgcacacac acacgcagac ctactatgaa ctggcttgctg ctcagcaaga gcagaattga
120
tgagcagata ccttaagaat cttttagagc aggaccacgt acaagggcaa atcctccttc
180
cagacctact cggactacct gcgctgggag agcttcctcc agcagcagct gcaggccttg
240
cccaggggct cagtcctgcg ccggggcttc cagacctgcg agcactggaa gcagatattc
300
atggaaatcg taggggtgca gagcgccctg tgcggcctgg tgctatccct gctcatctgc
360

```

gtggcgcggg tggccgtgtt caccacccac atcctgctcc tgctgcccgt gtcctcagc
 420
 atcttgggca tcgtgtgcct ggtggtgacc atcatgtact ggagcggctg ggagatgggg
 480
 gctgtggaag ccatctccct gtccatcctc gttggctcct ccgtggatta ctgcgtccac
 540
 ctggtcgagg gctacctgct ggctggagag aacctgcccc cccaccaggc cgaggacgcc
 600
 cgaacgcagc gccagtggcg tacgctggag gccgtgcggc acgtgggcgt ggccatcgtc
 660
 tccagtgtcc tcaccacggt catcgccaca gtgcccctct tcttctgcat catcgcccca
 720
 tttgccaagt tcggcaagat tgtggcactc aacacgggcg tgtccatcct ctacacgctg
 780
 accgtcagca ccgccctgct gggcatcatg gcgccagct ctttactcgt gaccgggact
 840
 tccttcctca aggccttggg tgccgtgctg ctggcagggg ccctggggct gggtgccctg
 900
 ctctgctcc tgcaagcgg ctataagatt cccctgcccg caggggcctc cctatagccc
 960
 gggacgggct ctggacactt gcaccttggg tccatgggt gggggacagg agctgcttcc
 1020
 cagctcgact tcagctagct gtgtccccag gcctgggccc agggcgccct gcgggccagc
 1080
 gtggaggctg acaccacac agatggtgtg gacctgctg ctttgtggag ctgggagttg
 1140
 gagacagccg ccaccccaca ggccgggcta ctggcagcca cactcggctt tttgccagt
 1200
 ggcagaagag accagccctc ctcccatgcc cggtcacat gggggtcagg ttatttttgt
 1260
 aggggtctc cctctcacac tgccctcagt ctcacaacct tccagtgtgg atgttacagg
 1320
 gtggcccca ttctaccgat gtgaaaactg aggcgccagg acacagtggc tgccctgtcg
 1380
 ctggatcagt agcagagcca gagctgcctc cgagcgccat gccgccctcg ggaatcatac
 1440
 aggaagagca cagtggatcc aggggtgggg cctctaccc cctaaccg cccccc
 1496

<210> 5704

<211> 269

<212> PRT

<213> Homo sapiens

<400> 5704

Ser	Arg	Thr	Thr	Tyr	Lys	Gly	Lys	Ser	Ser	Phe	Gln	Thr	Tyr	Ser	Asp
1				5				10					15		
Tyr	Leu	Arg	Trp	Glu	Ser	Phe	Leu	Gln	Gln	Gln	Leu	Gln	Ala	Leu	Pro
		20						25					30		
Glu	Gly	Ser	Val	Leu	Arg	Arg	Gly	Phe	Gln	Thr	Cys	Glu	His	Trp	Lys
		35					40					45			
Gln	Ile	Phe	Met	Glu	Ile	Val	Gly	Val	Gln	Ser	Ala	Leu	Cys	Gly	Leu
	50					55					60				
Val	Leu	Ser	Leu	Leu	Ile	Cys	Val	Ala	Ala	Val	Ala	Val	Phe	Thr	Thr

```

65          70          75          80
His Ile Leu Leu Leu Leu Pro Val Leu Leu Ser Ile Leu Gly Ile Val
          85          90          95
Cys Leu Val Val Thr Ile Met Tyr Trp Ser Gly Trp Glu Met Gly Ala
          100          105          110
Val Glu Ala Ile Ser Leu Ser Ile Leu Val Gly Ser Ser Val Asp Tyr
          115          120          125
Cys Val His Leu Val Glu Gly Tyr Leu Leu Ala Gly Glu Asn Leu Pro
          130          135          140
Pro His Gln Ala Glu Asp Ala Arg Thr Gln Arg Gln Trp Arg Thr Leu
          145          150          155          160
Glu Ala Val Arg His Val Gly Val Ala Ile Val Ser Ser Ala Leu Thr
          165          170          175
Thr Val Ile Ala Thr Val Pro Leu Phe Phe Cys Ile Ile Ala Pro Phe
          180          185          190
Ala Lys Phe Gly Lys Ile Val Ala Leu Asn Thr Gly Val Ser Ile Leu
          195          200          205
Tyr Thr Leu Thr Val Ser Thr Ala Leu Leu Gly Ile Met Ala Pro Ser
          210          215          220
Ser Phe Thr Arg Thr Arg Thr Ser Phe Leu Lys Ala Leu Gly Ala Val
          225          230          235          240
Leu Leu Ala Gly Ala Leu Gly Leu Gly Ala Cys Leu Val Leu Leu Gln
          245          250          255
Ser Gly Tyr Lys Ile Pro Leu Pro Ala Gly Ala Ser Leu
          260          265

```

<210> 5705

<211> 768

<212> DNA

<213> Homo sapiens

<400> 5705

```

.ntggagccgc tgagcccccg ctgcggccgg gagctgcatg ggggagcgcg ggccaggctc
60
gggaagatgc cccggccgga gttgcccctg ccggaggggt gggaggaggc gcgcgacttc
120
gacggcaagg tctactacat agaccacacg aaccgcacca ccagctggat cgacccgcgg
180
gacaggtaca ccaaaccact cacctttgct gactgcatta gcgacgagtt gccgctggga
240
tgggaagagg catatgaccc acaggttgga gattacttca tagaccacaa taccaaaacc
300
actcagattg aggatccaag ggtgcaatgg cggcgggagc aggaacatat gctgaaggat
360
tacctggtgg tggcccagga ggctctgagt gcacaaaagg agatctacca ggtgaagcag
420
cagcgccctg agcttgca caaggagtac cagcaactgc atgccgtctg ggagcataag
480
ctggggtccc aggtcagctt ggtctctggt tcatcatcca gctccaagta tgaccctgag
540
atcctgaaag ctgaaattgc cactgcagtt caaagagcgt ggctttcaga ccctgaagaa
600
aatcgataag aaaatgtctg atgctcaggg cagctacaaa ctggatgaag ctcaggctgt
660

```

cttgagagaa acaaaagcca tcaaaaaggc tattacctgg agagttcgag ttccccgcta
 720
 ccgaaacatt acctggattt tagctcccag acagacatct cggaagc
 768

<210> 5706

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5706

Xaa	Glu	Pro	Leu	Ser	Pro	Arg	Cys	Gly	Arg	Glu	Leu	His	Gly	Gly	Ala
1				5					10					15	
Arg	Ala	Arg	Leu	Gly	Lys	Met	Pro	Arg	Pro	Glu	Leu	Pro	Leu	Pro	Glu
			20					25					30		
Gly	Trp	Glu	Glu	Ala	Arg	Asp	Phe	Asp	Gly	Lys	Val	Tyr	Tyr	Ile	Asp
	35						40					45			
His	Thr	Asn	Arg	Thr	Thr	Ser	Trp	Ile	Asp	Pro	Arg	Asp	Arg	Tyr	Thr
	50					55					60				
Lys	Pro	Leu	Thr	Phe	Ala	Asp	Cys	Ile	Ser	Asp	Glu	Leu	Pro	Leu	Gly
65					70					75				80	
Trp	Glu	Glu	Ala	Tyr	Asp	Pro	Gln	Val	Gly	Asp	Tyr	Phe	Ile	Asp	His
			85						90					95	
Asn	Thr	Lys	Thr	Thr	Gln	Ile	Glu	Asp	Pro	Arg	Val	Gln	Trp	Arg	Arg
			100					105					110		
Glu	Gln	Glu	His	Met	Leu	Lys	Asp	Tyr	Leu	Val	Val	Ala	Gln	Glu	Ala
	115						120					125			
Leu	Ser	Ala	Gln	Lys	Glu	Ile	Tyr	Gln	Val	Lys	Gln	Gln	Arg	Leu	Glu
	130					135					140				
Leu	Ala	Gln	Gln	Glu	Tyr	Gln	Gln	Leu	His	Ala	Val	Trp	Glu	His	Lys
145					150					155					160
Leu	Gly	Ser	Gln	Val	Ser	Leu	Val	Ser	Gly	Ser	Ser	Ser	Ser	Ser	Lys
			165						170					175	
Tyr	Asp	Pro	Glu	Ile	Leu	Lys	Ala	Glu	Ile	Ala	Thr	Ala	Val	Gln	Arg
		180						185					190		
Ala	Trp	Leu	Ser	Asp	Pro	Glu	Glu	Asn	Arg						
		195					200								

<210> 5707

<211> 6988

<212> DNA

<213> Homo sapiens

<400> 5707

nnctcttggtg ctctccteta gttttactga actgccagta ctttgaacac actttgtgct
 60
 ttttctcctc caggtctttg tgcatactgt ttctcttgcc tggaatactc ttctttctct
 120
 ttacctgact cgtttctgct cttacttcaa gtctcagatt ctaggaagct ttccatcaac
 180
 ctgctatcac tgggacgagt tggccatccc ctgtgcttct gtagctocta tgaaatcata
 240
 atagttgaaa tgtgatgttt aaatgtttac ttggcattct cctctactga actctaagct
 300

ttgtgaggggt agtgatgggtg gctttgccta ttgttttggt tcccttaaat ctaaaccgag
360
tgcttggcac atagtagcct ccagtaaag cttgtttaat gaacaaaca acctgtgaag
420
tgagtgatag agtgcttagt ccccttcagt ttccaggatg gagagatgga gaataaggac
480
ctcacacaaa atcacacagt acttggtgga agaagctgag ctatgacctg ccttccttca
540
gaggaatgca ctttgctttg gaagatatga agaaattccc agtacattgt ctttcctatt
600
gggtctgtgt gagaacaggc tgatagatgc ctctgtgtca agctgagctc ccagactctg
660
atacaggctg gggatgatga gaagaaccag aggacgatca ctgtcaaccc tgcccacatg
720
gggaaagcat tcaaggttat gaatgaactg cggagtaaac agctgttggtg tgacgtgatg
780
attgtggcag aagatgtcga gatagaagcc caccgtgtgg tcctggcagc ctgcagcccc
840
tacttctgtg cgatgttcac aggtgacatg tctgagagta aagccaaaaa gatagaaatc
900
aaggacgtgg atgggcagac gctgagtaag ctgattgact acatctatac tgctgaaatc
960
gaggtgactg aagagaatgt ccaggtgctg ctcccggcag ccagcttgct gcagctcatg
1020
gatgttcggc agaactgctg tgacttcctg cagtctcagt tgcattccac caattgcctg
1080
ggcatccgtg cgtttgaga tgtacacacc tgcactgacc ttctgcagca ggccaatgcc
1140
tacgcagagc agcactttcc agaggtgatg ctaggagaag aatttcttag cctgagtctg
1200
gaccaggtgt gcagcttgat atccagcgac aagctgaccg tttcttcaga agagaaggtg
1260
tttgaagctg tgatctcatg gatcaattat gagaaagaaa cccgtttaga gcacatggca
1320
aagctgatgg aacatgtccg acttcctctc ttacctaggg actacctagt ccaaaccggtt
1380
gaagaagaag ctttgataaa gaataacaac acctgtaaag acttcctcat tgaggccatg
1440
aaataccatc tcctccctct ggatcagaga ctattgatta agaaccaag gaccaagccc
1500
aggactccag tcagccttcc caaggtcatg attgtggttg ggggccaggc acccaaggca
1560
atccgcagtg tggagtgtca tgatttcgag gaggaccggt gggatcagat tgctgagctt
1620
ccttcagaa gatgcagagc aggtgtggtg ttcattggctg gccacgtgta tgccgtggga
1680
gggtttaatg gctcactgcg ggtgcggaca gtggatgtgt atgacggcgt gaaggaccag
1740
tggacgtcca ttgccagcat gcaggagcgc cggagcacac tgggcgagc ggtgctcaat
1800
gacttgctct acgcagtggg aggctttgat ggcagtactg gcctagcatc ggtggaagcc
1860
tacagctaca agaccaacga gtggttcttt gtggccccga tgaacacgcg gcggagcagt
1920

gtgggtgtgg gcgttgtgga ggggaagcta tatgctgttg ggggttatga tggagcttcc
1980
cgccagtgtc tgagcactgt ggagcagtac aaccagcgga ccaatgaatg gatatacgtg
2040
gcggacatga gcacccgccg cagtggcgca ggggttggag tgcttagcgg acagctgtac
2100
gccacaggtg ggcacgatgg gcctttggtg aggaagagcg ttgaggttta cgatcctgga
2160
acaaatacct ggaagcaagt ggagacatg aacatgtgcc ggcgcaacgc aggggtctgt
2220
gcagtaaata ggctcctgta tgtggttggga ggggatgatg gatcctgcaa cttggcttgc
2280
gtggagtact acaatcctgt cactgacaaa tggacgctgc ttccaacgaa catgagcacg
2340
gggcggagct atgcaggtgt tgccgtgatt cacaagtcct tgtgaccaa actcctactg
2400
ccaggaggtg gaggaaggag caggtgctgc ctgtgactct gaacagcagg accttggtga
2460
ctggattcaa cttgcttggg agggctctgt ctgctgtgag aaccgctctc ctctgacttg
2520
gcagactggt gttgttcacg gcagtgtgga caccattacc caccctcgtt cccctgaggt
2580
gctctggcct atgccctgag caaggggggt cttgacatcc ccaggcagca cctttgggct
2640
ttgttttggg gtttctacag ggacaataca gaccctggag tgtgtgtgtg tgtgtgtgtg
2700
tgtagaccat ggtgtttctc tatgtttctc taagtgtggg ggtgagcgtg tgtgacagtc
2760
tactggattt ctttactact gatcctttcg ctgtgttaaa aatcaagtca cagagacctc
2820
tcttctggat ttgtcccatg gggaccctga gactactaaa gctgctttct tctgaaggtc
2880
cagttggaca gtctgggaat gtccagaaat aaccagtga aggggcagtt ctctggccac
2940
accacttat gtactttaac tactgtgact ttgtctgcag aagagctgga aaattctcga
3000
agctgcaccg tgtcctctgt gtgctagaat aagggacaaa tgggttcctt gtgcttctca
3060
gctcactgtt tttccttgag ttctcctaca ggaagcagat gagaactgcc cagtcttcag
3120
gtttaggcca ttggtctttg atgtcataga ttccaggcct gggaggtgtt atgtctcttc
3180
agctgggaaa actagctctt cagagaagcc tcgggtaaca ctgaaaaaca aaacaaaaca
3240
aaacaaaaac aggaaaaaaa caaaaaacca aagtggtaag gattcagttc ctgcctataa
3300
tggtctcaga gagggctcta cttttagggt ttcccaggac aggacagtcc ccatttatac
3360
ttattatccc agtttaatta ttcacagcac cccattttac tcagaagtgt tctgggtctgg
3420
aggataaata agaggtcacc ctctccaga cccaaagata gatttgtgcc tgtgttggat
3480
ggggtcgtgt gtgattcaga tggacattgg atggcttcaa aggaatatac cactagagct
3540

ggcccttggc actttgtgac agtgggtcaag tctgtctaata gtccttgtct tctttttctt
3600
gtgctttccc cctattccag ggtgtgcacc ctctcccaa cccccaagaa cccactact
3660
gctttccctg tgaggtagga gatatcagtg ggtcttggat ttgaggcttc ctaagatgtg
3720
cttgcattht aaaaaggag cttgggtgaga gctttgctaa ttcacaggta aaaattatta
3780
acaatagaac ttcaagcatc ttgaggagcg ggcatttgag ggggcatgga gtaatttgta
3840
tttaaaaaac cttaaagttg tgctgttctt aaactagcaa attgctcatg ctgaaatttc
3900
tggcataagc aggggaagtc ttgtgtctgg agaatagtct cataccttgc agtctgggac
3960
accctcccta ctttgagaat ccacctacag gaagccaagg aactttataa atcctgatgt
4020
tggacttctg atacgactgg gctacttcca agcagggtgt gcaggagatt ggcaccccc
4080
agccctgca gttagaaacc ccgaagtctt cccagccagt gagccacttt gtgtatttac
4140
tgtatattta ttgtgcccta aatgtgcaac tctcctaaag acaaaacttc tctttctgat
4200
gttaagcaca tggtacttca acaagatgct tggagaacaa caaggtagcc agaattttta
4260
gaagccttca gaagaggcta aaatatccag ctttggggga cctggaagaa atgtctccaa
4320
aggaagcaag gcatgtttta gttgagtgtc ctggtctcac tatgaagtgg ggatgactgt
4380
ggcttcataa ctctacctgg ctgtgggttg gaagctgatg gaatgagaaa tgtcctttct
4440
ccttctctga ggaaattttg agacttgttt cgggtgtgtc gtgtgatggg gatgaggctg
4500
gggttgggat ctgatgtatg ccattcacag aagctctcaa tttcagatga taggtgaatt
4560
ccctgcccct cccccaccac tgagaagcta gactttcatg cgggagaggc tacttttatg
4620
tgtcgtcttc cggggaaggg tccctccact gaaagctagc cagtcatgtt ttctgttttt
4680
ggatttttgc aattgggttc acctcatgtc tccctcccta caaagcactg cctctactgg
4740
gcgtgctgcc aaggccatgt gactccatc ctcatgtatc ctttttcacg gggaccagaa
4800
cactggtacg tcatcaccaa agccaatctg ctctagctgc ccacagatgc caccaaaacc
4860
tgctatctct tcatcaccag gtacgattct cttccacag tggacacagc aggctatttt
4920
ctagtttgtg ctggtcacgt ggtagatgaa gcctcttact gcccactta gggtgccac
4980
ggctgcttgt gaatgcagct ttgccagtgg catatctgtc atctgattgc ggtggtgaaa
5040
tggaattgag gccaagggtt agaagcagcc gagacgccac ttggatactg atttgaacaa
5100
tgtagaagtc agattctgaa ttccaaagtt atttctcata agtaccat ggcattctct
5160

catctacaaa gttgcagtat tatgcaaata aaactgacct cattttctgc tatgcaataa
5220
gaataacttaa ttctagttcc cgacaagcca gttgcaatat cccctaagat gctttttgag
5280
ctgtcttact ttgatatctg ttgtgtaacg ttgttatatt tctgagccag atcctttcaa
5340
agattgcctt ttataaaaat tgaagctata gcttttaggc taaaatttta acgtagatat
5400
ttttataaga tatttttttc aagagtttga atcgcttttt attgtccatg gtaatgaaat
5460
gttggtgtct ttgcatcatt cactctcaaa cgtagttcat gcctgtagct ctcttccttt
5520
tgtttctcac ccttcagaaa catatttttc agtagctcca ggtagatgag cctttttttt
5580
ttttttttta aataccatat tcaagggagt ctgctgaatt ttaaaacgca gtcactgggtg
5640
tttcttgaat tgctagggac tgatgttatg ttcgactcag cacttgcccg tctgtattga
5700
ttgtgtcttt tttttttttt ttttggagtc tgctttctgt gggggtgagg ccgggctgtc
5760
tcgtggtggc tcccactgac gggcactgag cctggtaccc tgtggcatgg agaagcctca
5820
gggaaaggcc tgccccccca gcacatactc ccatagtgtc ctaggtccag ccgaccattc
5880
cttattctct tctatctcct tgttgatctg aagcttccaa tagcttgagg cctttgtgtc
5940
tggatgatgc cctttttggg agcatcttgt ctctaaccct taaaagaggg gtcaatcctc
6000
atgatccctg tgtgttaagc atatgctttg cagggtgtca cactacactt acaacttgct
6060
tcttgagcta tgtctctact ccaggctctg ttttgtgtat ttatctgcca tttgcatcat
6120
ggtttttaaa atttattatt attattatta ttgttgggac aggtgccatt taaattgcct
6180
ccatgctccc catttgcacc tagctggatc aagttgggag gctgagcaaa ctcatattcc
6240
agttagttgg agtttttaaa ggctctgttt gcctggagaa gcaaggaggt tagaatgtaa
6300
tttttttaag cgtttgcact atttagagtc ctaagcccct catgttcagc tgtgctgtgt
6360
ttctactgac caagcaggag agccagcagc acttcagca tttgggaatg gaagagattt
6420
cttctgtagt ggataattgc agcctcatag cccctgtgca gccttcgtca tgggactcag
6480
tgactcatgg atatagcatc agccatggca ggaatgcaca ggactgtggc atttgcagca
6540
tcaaataccc ctagtgccat gtttggttat gagattgtaa attattcgct cccccgtcct
6600
cccccccct cattttcagt ggcaatagag gacccttggt gtacttcttg ttttaatttg
6660
atattatgtg taaaatgctt tcgttgaaag aaaactgaag aactgaatg tgtatgtctg
6720
tgtgggtgct ctgtccctgt ggttgtcata gccagtcaga cttgatcact gacacccgct
6780

acaacatatt gcataggttaa gatcctcgat ctggtgttct ctgcgtggct gttagggact
 6840
 gtatatcttg taaaagaaca cttgtcacat gcttgatcag ttacagcaat agctgaagaa
 6900
 acatttcctc aaatgtatta ttttaacagg aatcatgttc taatttccca tcctttaatt
 6960
 ttaataaaaag ctgaactgtg tgaaaaaa
 6988

<210> 5708

<211> 506

<212> PRT

<213> Homo sapiens

<400> 5708

Asp	Met	Ser	Glu	Ser	Lys	Ala	Lys	Lys	Ile	Glu	Ile	Lys	Asp	Val	Asp	1	5	10	15
Gly	Gln	Thr	Leu	Ser	Lys	Leu	Ile	Asp	Tyr	Ile	Tyr	Thr	Ala	Glu	Ile	20	25	30	
Glu	Val	Thr	Glu	Glu	Asn	Val	Gln	Val	Leu	Leu	Pro	Ala	Ala	Ser	Leu	35	40	45	
Leu	Gln	Leu	Met	Asp	Val	Arg	Gln	Asn	Cys	Cys	Asp	Phe	Leu	Gln	Ser	50	55	60	
Gln	Leu	His	Pro	Thr	Asn	Cys	Leu	Gly	Ile	Arg	Ala	Phe	Ala	Asp	Val	65	70	75	80
His	Thr	Cys	Thr	Asp	Leu	Leu	Gln	Gln	Ala	Asn	Ala	Tyr	Ala	Glu	Gln	85	90	95	
His	Phe	Pro	Glu	Val	Met	Leu	Gly	Glu	Glu	Phe	Leu	Ser	Leu	Ser	Leu	100	105	110	
Asp	Gln	Val	Cys	Ser	Leu	Ile	Ser	Ser	Asp	Lys	Leu	Thr	Val	Ser	Ser	115	120	125	
Glu	Glu	Lys	Val	Phe	Glu	Ala	Val	Ile	Ser	Trp	Ile	Asn	Tyr	Glu	Lys	130	135	140	
Glu	Thr	Arg	Leu	Glu	His	Met	Ala	Lys	Leu	Met	Glu	His	Val	Arg	Leu	145	150	155	160
Pro	Leu	Leu	Pro	Arg	Asp	Tyr	Leu	Val	Gln	Thr	Val	Glu	Glu	Glu	Ala	165	170	175	
Leu	Ile	Lys	Asn	Asn	Asn	Thr	Cys	Lys	Asp	Phe	Leu	Ile	Glu	Ala	Met	180	185	190	
Lys	Tyr	His	Leu	Leu	Pro	Leu	Asp	Gln	Arg	Leu	Leu	Ile	Lys	Asn	Pro	195	200	205	
Arg	Thr	Lys	Pro	Arg	Thr	Pro	Val	Ser	Leu	Pro	Lys	Val	Met	Ile	Val	210	215	220	
Val	Gly	Gly	Gln	Ala	Pro	Lys	Ala	Ile	Arg	Ser	Val	Glu	Cys	Tyr	Asp	225	230	235	240
Phe	Glu	Glu	Asp	Arg	Trp	Asp	Gln	Ile	Ala	Glu	Leu	Pro	Ser	Arg	Arg	245	250	255	
Cys	Arg	Ala	Gly	Val	Val	Phe	Met	Ala	Gly	His	Val	Tyr	Ala	Val	Gly	260	265	270	
Gly	Phe	Asn	Gly	Ser	Leu	Arg	Val	Arg	Thr	Val	Asp	Val	Tyr	Asp	Gly	275	280	285	
Val	Lys	Asp	Gln	Trp	Thr	Ser	Ile	Ala	Ser	Met	Gln	Glu	Arg	Arg	Ser	290	295	300	
Thr	Leu	Gly	Ala	Ala	Val	Leu	Asn	Asp	Leu	Leu	Tyr	Ala	Val	Gly	Gly				

305					310					315				320	
Phe	Asp	Gly	Ser	Thr	Gly	Leu	Ala	Ser	Val	Glu	Ala	Tyr	Ser	Tyr	Lys
					325					330				335	
Thr	Asn	Glu	Trp	Phe	Phe	Val	Ala	Pro	Met	Asn	Thr	Arg	Arg	Ser	Ser
					340					345				350	
Val	Gly	Val	Gly	Val	Val	Glu	Gly	Lys	Leu	Tyr	Ala	Val	Gly	Gly	Tyr
					355					360				365	
Asp	Gly	Ala	Ser	Arg	Gln	Cys	Leu	Ser	Thr	Val	Glu	Gln	Tyr	Asn	Pro
					370					375				380	
Ala	Thr	Asn	Glu	Trp	Ile	Tyr	Val	Ala	Asp	Met	Ser	Thr	Arg	Arg	Ser
					385					390				395	
Gly	Ala	Gly	Val	Gly	Val	Leu	Ser	Gly	Gln	Leu	Tyr	Ala	Thr	Gly	Gly
					405					410				415	
His	Asp	Gly	Pro	Leu	Val	Arg	Lys	Ser	Val	Glu	Val	Tyr	Asp	Pro	Gly
					420					425				430	
Thr	Asn	Thr	Trp	Lys	Gln	Val	Ala	Asp	Met	Asn	Met	Cys	Arg	Arg	Asn
					435					440				445	
Ala	Gly	Val	Cys	Ala	Val	Asn	Gly	Leu	Leu	Tyr	Val	Val	Gly	Gly	Asp
					450					455				460	
Asp	Gly	Ser	Cys	Asn	Leu	Ala	Ser	Val	Glu	Tyr	Tyr	Asn	Pro	Val	Thr
					465					470				475	
Asp	Lys	Trp	Thr	Leu	Leu	Pro	Thr	Asn	Met	Ser	Thr	Gly	Arg	Ser	Tyr
					485					490				495	
Ala	Gly	Val	Ala	Val	Ile	His	Lys	Ser	Leu						
					500				505						

<210> 5709

<211> 1805

<212> DNA

<213> Homo sapiens

<400> 5709

aatctcacc cccctggtgga catggaggag ctggagatgt cagggaacca cttccctgag
60
atcaggcctg gctccttcca tggcctgagc tccctcaaga agctctgggt catgaactca
120
caggtcagcc tgattgagcg gaatgctttt gacgggctgg cttcacttgt ggaactcaac
180
ttggcccaca ataacctctc ttctttgccc catgacctct ttaccccgct gaggtacctg
240
gtggagttgc atctacacca caacccttgg aactgtgatt gtgacattct gtggctagcc
300
tggtggcttc gagagtatat accaccaat tccacctgct gtggccgctg tcatgctccc
360
atgcacatgc gagggcgcta cctcgtggag gtggaccagg cctccttcca gtgctctgcc
420
cccttcacatc tggacgcacc tcgagacctc aacatttctg agggtcggat ggcagaactt
480
aagtgtcgga ctecccttat gtcctccgtg aagtgggtgc tgcccaatgg gacagtgtct
540
agccacgcct ccgcccaccc aaggatctct gtcctcaacg acggcacctt gaacttttcc
600
cacgtgctgc tttcagacac tgggggtgtac acatgcatgg tgaccaatgt tgcaggcaac
660

tccaacgcct cggcctacct caatgtgagc acggctgagc ttaacacctc caactacagc
 720
 ttcttcacca cagtaacagt ggagaccacg gagatctcgc ctgaggacac aacgcgaaag
 780
 tacaagcctg ttcttaccac gtccactggt taccagccgg catataccac ctctaccacg
 840
 gtgctcattc agactaccgg tgtgcccagg cagggtggcag taccgcgcac agacaccact
 900
 gacaagatgc agaccagcct ggatgaagtc atgaagacca ccaagatcat cattggctgc
 960
 tttgtggcag tgactctgct agctgccgcc atgttgattg tcttctataa acttcgtaag
 1020
 cggcaccagc agcggagtag agtcacagcc gcccgactg ttgagataat ccagggtggac
 1080
 gaagacatcc cagcagcaac atccgcagca gcaacagcag ctccgtccgg tgtatcaggt
 1140
 gagggggcag tagtgctgcc cacaattcat gaccatatta actacaacac ctacaaacca
 1200
 gcacatgggg cccactggac agaaaacagc ctgggggaact ctctgcaccc cacagtcacc
 1260
 actatctctg aaccttatat aattcagacc cataccaagg acaaggtaca ggaaactcaa
 1320
 atatgactcc cctcccccaa aaaaacttat aaaatgcaat agaatgcaca caaagacagc
 1380
 aacttttgta cagagtgggg agagactttt tcttgatat gcttatatat taagtctatg
 1440
 ggctgggtta aaaaaacaga ttatattaaa atttaaagac aaaaagtcaa aacaaaaata
 1500
 ttttctaact tgtaagttct atttaaaggg ggtggggggg aatcttgga acgttggtggg
 1560
 gtacaagcca caagttaact tgctatgctg ccagaaggga tttctggtat aaggttgaaa
 1620
 ttgctgagat aaaataaact aaaacaaca acatccttaa agaggtaggg tgtgggctgc
 1680
 tgagggggca agagggatag actgaatctg tcatttttta gaagatgctt cataggacac
 1740
 aggactatcc atttctacag acatctttct taagccgaga gctgtctttg cagaattatc
 1800
 ttatt
 1805

<210> 5710

<211> 441

<212> PRT

<213> Homo sapiens

<400> 5710

Asn	Leu	Thr	Pro	Leu	Val	Asp	Met	Glu	Glu	Leu	Glu	Met	Ser	Gly	Asn
1				5					10					15	
His	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly	Leu	Ser	Ser	Leu
			20					25				30			
Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser	Leu	Ile	Glu	Arg	Asn
		35				40					45				
Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu	Leu	Asn	Leu	Ala	His	Asn

50					55						60					
Asn	Leu	Ser	Ser	Leu	Pro	His	Asp	Leu	Phe	Thr	Pro	Leu	Arg	Tyr	Leu	
65					70					75					80	
Val	Glu	Leu	His	Leu	His	His	Asn	Pro	Trp	Asn	Cys	Asp	Cys	Asp	Ile	
				85					90					95		
Leu	Trp	Leu	Ala	Trp	Trp	Leu	Arg	Glu	Tyr	Ile	Pro	Thr	Asn	Ser	Thr	
			100					105					110			
Cys	Cys	Gly	Arg	Cys	His	Ala	Pro	Met	His	Met	Arg	Gly	Arg	Tyr	Leu	
		115					120					125				
Val	Glu	Val	Asp	Gln	Ala	Ser	Phe	Gln	Cys	Ser	Ala	Pro	Phe	Ile	Met	
130						135					140					
Asp	Ala	Pro	Arg	Asp	Leu	Asn	Ile	Ser	Glu	Gly	Arg	Met	Ala	Glu	Leu	
145					150				155					160		
Lys	Cys	Arg	Thr	Pro	Pro	Met	Ser	Ser	Val	Lys	Trp	Leu	Leu	Pro	Asn	
				165					170					175		
Gly	Thr	Val	Leu	Ser	His	Ala	Ser	Arg	His	Pro	Arg	Ile	Ser	Val	Leu	
			180					185					190			
Asn	Asp	Gly	Thr	Leu	Asn	Phe	Ser	His	Val	Leu	Leu	Ser	Asp	Thr	Gly	
		195					200					205				
Val	Tyr	Thr	Cys	Met	Val	Thr	Asn	Val	Ala	Gly	Asn	Ser	Asn	Ala	Ser	
	210					215					220					
Ala	Tyr	Leu	Asn	Val	Ser	Thr	Ala	Glu	Leu	Asn	Thr	Ser	Asn	Tyr	Ser	
225					230				235					240		
Phe	Phe	Thr	Thr	Val	Thr	Val	Glu	Thr	Thr	Glu	Ile	Ser	Pro	Glu	Asp	
				245					250					255		
Thr	Thr	Arg	Lys	Tyr	Lys	Pro	Val	Pro	Thr	Thr	Ser	Thr	Gly	Tyr	Gln	
			260					265					270			
Pro	Ala	Tyr	Thr	Thr	Ser	Thr	Thr	Val	Leu	Ile	Gln	Thr	Thr	Arg	Val	
	275						280					285				
Pro	Lys	Gln	Val	Ala	Val	Pro	Ala	Thr	Asp	Thr	Thr	Asp	Lys	Met	Gln	
	290					295					300					
Thr	Ser	Leu	Asp	Glu	Val	Met	Lys	Thr	Thr	Lys	Ile	Ile	Ile	Gly	Cys	
305					310					315				320		
Phe	Val	Ala	Val	Thr	Leu	Leu	Ala	Ala	Ala	Met	Leu	Ile	Val	Phe	Tyr	
			325					330						335		
Lys	Leu	Arg	Lys	Arg	His	Gln	Gln	Arg	Ser	Thr	Val	Thr	Ala	Ala	Arg	
			340					345					350			
Thr	Val	Glu	Ile	Ile	Gln	Val	Asp	Glu	Asp	Ile	Pro	Ala	Ala	Thr	Ser	
	355						360					365				
Ala	Ala	Ala	Thr	Ala	Ala	Pro	Ser	Gly	Val	Ser	Gly	Glu	Gly	Ala	Val	
	370					375					380					
Val	Leu	Pro	Thr	Ile	His	Asp	His	Ile	Asn	Tyr	Asn	Thr	Tyr	Lys	Pro	
385					390					395				400		
Ala	His	Gly	Ala	His	Trp	Thr	Glu	Asn	Ser	Leu	Gly	Asn	Ser	Leu	His	
			405					410						415		
Pro	Thr	Val	Thr	Thr	Ile	Ser	Glu	Pro	Tyr	Ile	Ile	Gln	Thr	His	Thr	
			420					425					430			
Lys	Asp	Lys	Val	Gln	Glu	Thr	Gln	Ile								
			435				440									

<210> 5711

<211> 1142

<212> DNA

<213> Homo sapiens

<400> 5711

tggagggtggg ggagtatgaa tggggctttc agagttggat gttataaaac atagtcattt
 60
 ggaagttggg aactttttat ttttgttatc ttgtttttaa tacaggatgt ttgccacacg
 120
 agtcactcga gagaatctct gagtcctggc gagggctttc tgaggcttcg tgtattagca
 180
 gctgtttgtct tccaactcag cggcagggttt gcctttcccc acggacactc tggaccttgt
 240
 agctcctcaa gcttcctctg ctattgagca gataggaagc cgtgtcaa atgtggcacc
 300
 ttgaggaaat gcctagttaa tgacagacaa cttgcctttg atgattttca agagagttgt
 360
 gctatgatgt ggcaaaagta tgcaggaagc aggcgggtcaa tgcctctggg agcaaggatc
 420
 cttttccacg gtgtgttcta tgccgggggc tttgccattg tgtattacct cattcaaaag
 480
 tttcattcca gggctttata ttacaagttg gcagtggagc agctgcagag ccattcccgag
 540
 gcacaggaag ctctggggcc tcctctcaac atccattatc tcaagctcat cgacagggaa
 600
 aacttcgtgg acattgttga tgccaagttg aagattcctg tctctggatc caaatcagag
 660
 ggccttctct acgtccactc atccagaggt ggcccccttc agaggtggca ccttgacgag
 720
 gtcttttttag agctcaagga tggtcagcag attcctgtgt tcaagctcag tggggaaaac
 780
 ggtgatgaag tgaaaaagga gtagagacga cccagaagac ccagcttgct tctagtccat
 840
 ccttcctca tctctaccat atggccactg ggggtggggc ccattctcagt gacagacact
 900
 cctgcaaccc agttttccag ccaccagtgg gatgatggta tgtgccagca catggtaatt
 960
 ttggtgtaat tctaacttgg gcacaacaaa tgctatttgt catttttaaa ctgaatccga
 1020
 aagaaactcc tattataaat ttaagataat gtaatgtatt tgaaagtgt ttgtataaaa
 1080
 aagcacatga taaaaggaat cagaattaat aaaatgtttg ttgatcttta aaaaaaaaaa
 1140
 1142

<210> 5712

<211> 145

<212> PRT

<213> Homo sapiens

<400> 5712

Met Trp Gln Lys Tyr Ala Gly Ser Arg Arg Ser Met Pro Leu Gly Ala
 1 5 10 15
 Arg Ile Leu Phe His Gly Val Phe Tyr Ala Gly Gly Phe Ala Ile Val
 20 25 30
 Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg Ala Leu Tyr Tyr Lys Leu
 35 40 45

Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly
 50 55 60
 Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe
 65 70 75 80
 Val Asp Ile Val Asp Ala Lys Leu Lys Ile Pro Val Ser Gly Ser Lys
 85 90 95
 Ser Glu Gly Leu Leu Tyr Val His Ser Ser Arg Gly Gly Pro Phe Gln
 100 105 110
 Arg Trp His Leu Asp Glu Val Phe Leu Glu Leu Lys Asp Gly Gln Gln
 115 120 125
 Ile Pro Val Phe Lys Leu Ser Gly Glu Asn Gly Asp Glu Val Lys Lys
 130 135 140
 Glu
 145

<210> 5713

<211> 1996

<212> DNA

<213> Homo sapiens

<400> 5713

ncgagcgggt gctgctagcg gaggcgccat attggagggg acaaaactcc ggcgacagcg
 60
 agtgacacaa ataaaccctt ggacccctt gttccctcag ctctaagggc cgcgatgttg
 120
 tacctagaag actatctgga aatgattgag cagcttccta tggatctgcg ggaccgcttc
 180
 acggaaatgc gcgagatgga cctgcaggtg cagaatgcaa tggatcaact agaacaaaga
 240
 gtcagtgaat tctttatgaa tgcaaagaaa aataaacctg agtggagggg agagcaaatg
 300
 gcatccatca aaaaagacta ctataaagct ttggaagatg cagatgagaa ggttcagttg
 360
 gcaaaccaga tatatgactt ggtagatcga cacttgagaa agctggatca ggaactggct
 420
 aagtttataaa tggagctgga agctgataat gctggaatta cagaaatatt agagaggcga
 480
 tctttggaat tagacactcc ttcacagcca gtgaacaatc accatgctca ttcacatact
 540
 ccagtggaaa aaaggaaata taatccaact tctcaccata cgacaacaga tcatattcct
 600
 gaaaagaaat ttaaactctga agctcttcta tccaccctta cgtcagatgc ctctaaggaa
 660
 aatacactag gttgtcgaaa taataattcc acagcctctt ctaacaatgc ctacaatgtg
 720
 aattcctccc aacctctggg atcctataac attggctcgt tatcttcagg aactgggtgca
 780
 ggggcaatta ccatggcagc tgctcaagca gttcaggcta cagctcagat gaaggagggg
 840
 cgaagaacat caagtttaaa agccagttat gaagcattta agaataatga ctttcagttg
 900
 ggaaaagaat tttcaatggc cagggaacaa gttggctatt catcatcttc ggcacttatg
 960

acaacattaa cacagaatgc cagttcatca gcagccgact cacggagtgg tcgaaagagc
 1020
 aaaaacaaca acaagtcttc aagccagcag tcatcatctt cctcctcctc ttcttcttta
 1080
 tcatcgtgtt cttcatcatc aactgttgta caagaaatct ctcaacaaac aactgtagt
 1140
 ccagaatctg attcaaatac tcagggtgat tggacttacg acccaaatac acctcgatac
 1200
 tgcatttgta atcagggtatc ttatgggtgag atgggtgggag gtgataacca agattgcctt
 1260
 atagaatggt tccattatgg ctgcgttgga ttgacagagg caccaaaagg caaatggtac
 1320
 tgtccacagt gcactgctgc aatgaagaga agaggcagca gacacaaata aagggtggtcc
 1380
 ttttgtttga tgaagaaata aacttcagct gaagatttta tataggactt taaaaagaag
 1440
 agaagagaaa gaagaaacaa tgcatttcca ggcaaccact taaaggattt acatagacaa
 1500
 tcctataaga tcttgaactt gaattttatg ggttgatatt taataatgta agtaaattat
 1560
 ttatgcactc ctgggtgtgct atgaatatta ttccagttag ccttggtatta tttcagtggc
 1620
 caacatatgc agacatttgt actcctcaac cattttctca aagtaatggg cattctatga
 1680
 tttagacttc aaggaattcc aatgatgaag attttaagga aagtatttta tattcaacag
 1740
 gtatattctg ctgcatgtac tgtactccag agctgttatg taacactgta tataaatggt
 1800
 tgcaaaaaaa aaaaagtcag tgcttctaaa aagaatttaa gataatgggt tttaaatgc
 1860
 ctttataata agctttgttt ctttgtgaaa ctaattcagc aggtgaagg aaatggttca
 1920
 tgtgataatg tgggctggtg tcctctagag tacctgggta cataaacgga aactcctgtt
 1980
 gggttaaaagt attttg
 1996

<210> 5714

<211> 408

<212> PRT

<213> Homo sapiens

<400> 5714

Ile	Glu	Gln	Leu	Pro	Met	Asp	Leu	Arg	Asp	Arg	Phe	Thr	Glu	Met	Arg
1				5				10					15		
Glu	Met	Asp	Leu	Gln	Val	Gln	Asn	Ala	Met	Asp	Gln	Leu	Glu	Gln	Arg
			20					25					30		
Val	Ser	Glu	Phe	Phe	Met	Asn	Ala	Lys	Lys	Asn	Lys	Pro	Glu	Trp	Arg
		35					40					45			
Glu	Glu	Gln	Met	Ala	Ser	Ile	Lys	Lys	Asp	Tyr	Tyr	Lys	Ala	Leu	Glu
	50					55				60					
Asp	Ala	Asp	Glu	Lys	Val	Gln	Leu	Ala	Asn	Gln	Ile	Tyr	Asp	Leu	Val
65					70					75				80	
Asp	Arg	His	Leu	Arg	Lys	Leu	Asp	Gln	Glu	Leu	Ala	Lys	Phe	Lys	Met

85 90 95
 Glu Leu Glu Ala Asp Asn Ala Gly Ile Thr Glu Ile Leu Glu Arg Arg
 100 105 110
 Ser Leu Glu Leu Asp Thr Pro Ser Gln Pro Val Asn Asn His His Ala
 115 120 125
 His Ser His Thr Pro Val Glu Lys Arg Lys Tyr Asn Pro Thr Ser His
 130 135 140
 His Thr Thr Thr Asp His Ile Pro Glu Lys Lys Phe Lys Ser Glu Ala
 145 150 155 160
 Leu Leu Ser Thr Leu Thr Ser Asp Ala Ser Lys Glu Asn Thr Leu Gly
 165 170 175
 Cys Arg Asn Asn Asn Ser Thr Ala Ser Ser Asn Asn Ala Tyr Asn Val
 180 185 190
 Asn Ser Ser Gln Pro Leu Gly Ser Tyr Asn Ile Gly Ser Leu Ser Ser
 195 200 205
 Gly Thr Gly Ala Gly Ala Ile Thr Met Ala Ala Ala Gln Ala Val Gln
 210 215 220
 Ala Thr Ala Gln Met Lys Glu Gly Arg Arg Thr Ser Ser Leu Lys Ala
 225 230 235 240
 Ser Tyr Glu Ala Phe Lys Asn Asn Asp Phe Gln Leu Gly Lys Glu Phe
 245 250 255
 Ser Met Ala Arg Glu Thr Val Gly Tyr Ser Ser Ser Ser Ala Leu Met
 260 265 270
 Thr Thr Leu Thr Gln Asn Ala Ser Ser Ser Ala Ala Asp Ser Arg Ser
 275 280 285
 Gly Arg Lys Ser Lys Asn Asn Asn Lys Ser Ser Ser Gln Gln Ser Ser
 290 295 300
 Ser Ser Ser Ser Ser Ser Ser Leu Ser Ser Cys Ser Ser Ser Ser Thr
 305 310 315 320
 Val Val Gln Glu Ile Ser Gln Gln Thr Thr Val Val Pro Glu Ser Asp
 325 330 335
 Ser Asn Ser Gln Val Asp Trp Thr Tyr Asp Pro Asn Glu Pro Arg Tyr
 340 345 350
 Cys Ile Cys Asn Gln Val Ser Tyr Gly Glu Met Val Gly Cys Asp Asn
 355 360 365
 Gln Asp Cys Pro Ile Glu Trp Phe His Tyr Gly Cys Val Gly Leu Thr
 370 375 380
 Glu Ala Pro Lys Gly Lys Trp Tyr Cys Pro Gln Cys Thr Ala Ala Met
 385 390 395 400
 Lys Arg Arg Gly Ser Arg His Lys
 405

<210> 5715

<211> 1458

<212> DNA

<213> Homo sapiens

<400> 5715

nggaaaggag ggtcaggcga gtccacgtga gggaagcccc cgctgtgctg ggagcctctg
 60
 ctgggaggag ggggagtgcc agccccagg agctaataccc cggctgatgg cgcagggccg
 120
 ggggcttgcc cgtctagtgt gatgaaggag gcgaccccca aggtgggaag gcgcacgggt
 180

tgggggtttga ggggtggatga ttgggtgacgg aggggtgtatc ttcaggagga ggttcgagtg
 240
 aagatcaaag acttgaatga acacattgtt tgctgcctat gcgcgggcta ctctgtggat
 300
 gccaccacca tcacagagtg tcttcatact ttctgcaaga gttgtattgt gaagtacctc
 360
 caaactagca agtactgccc catgtgcaac attaagatcc acgagacaca gccactgctc
 420
 aacctcaaac tggaccgggt catgcaggac atcgtgtata agctgggtgcc tggcttgcaa
 480
 gacagtgaag agaaacggat tcgggaattc taccagtccc gaggtttgga ccgggtcacc
 540
 cagccactg gggaagagcc agcactgagc aacctcgcc tccccttcag cagctttgac
 600
 cactctaaag cccactacta tcgctatgat gagcagttga acctgtgcct ggagcggctg
 660
 aggtgaggag aaggtcaggg gttgcaggag gtgacagtgc caatgacca gagccagggg
 720
 gggcttaggg gagaggctga gcagtgaagt agtgcctatc cccttgaaga gagtatatca
 780
 tggctctggg tggggaagag gaggaagat aggattccct aacctgtgtc tatttcccc
 840
 cagttctggc aaagacaaga ataaaagcgt cctgcagggt agaagggtg aggggagggc
 900
 ctctctaagg agactcacct cccatggtcc tccctcaca caccttgccc tcttccctcc
 960
 cctccctgct ccagaacaa gtatgtccga tgttctgtta gagctgaggt acgccatctc
 1020
 cggagggtcc tgtgtcaccg cttgatgcta aacctcagc atgtgcagct cctttttgac
 1080
 aatgaagttc tccctgatca catgacaatg aagcagatat gcctctcccg ctggttcggc
 1140
 aaggtaagcc aggccaccct ccctgggatc acacccctt cagactcccc ccaaccatcc
 1200
 tacagtctc aggggaaggg tgggctgagg ggccctttga ataataaag aacattcccc
 1260
 acgtactcca acttctcat tctctctta gccatccct ttgcttttac aataaagtgt
 1320
 gaaagagaag aggaggtagg ggccaagccc ccacccatc cactccct tccctccca
 1380
 gatatttatg tgaaatgaac tgcagcttta ttttttgaaa taaaacttt taaaagcaa
 1440
 aaaaaaaaaa aaaaaaaaaa
 1458

<210> 5716

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5716

Leu Gln Glu Glu Val Arg Val Lys Ile Lys Asp Leu Asn Glu His Ile
 1 5 10 15
 Val Cys Cys Leu Cys Ala Gly Tyr Phe Val Asp Ala Thr Thr Ile Thr

```
<210> 5717
<211> 1419
<212> DNA
<213> Homo sapiens
```

4882

ctgatctcca tcctgggtgg cctctgcctc tgctccgcct gctgctgagg ctctgacgag
 960
 gacccagccg ccagcgcccg gcggccctac caggctcccc tgtccgtgat gcccgtcgcc
 1020
 acctcgacc aagaaggcga cagcagcttt ggcaaatacg gcagaaacgc ctacgtgtag
 1080
 cagctctggc ccgtggggccc cgctgtcttc ccactgcccc aaggagaggg gacctggccc
 1140
 gggcccattc ccctatagta acctcagggg ccggccacgc cccgctcccc tagccccgcc
 1200
 ccggccacgg ccccggtgtct tgcaactctca tggcccctcc aggccaagaa ctgctcttgg
 1260
 gaagtgcgat atctcccctc tgaggctgga tccctcatct tctgaccctg ggttctgggc
 1320
 tgtgaagggg acggtgtccc cgcacgtttg tattgtgtat aaatacattc attaataaat
 1380
 gcatattgtg accgttaaaa aaaaaaaaaa aaaaaaaaaa
 1419

<210> 5718

<211> 228

<212> PRT

<213> Homo sapiens

<400> 5718

Met	Ser	Met	Ala	Val	Glu	Thr	Phe	Gly	Phe	Phe	Met	Ala	Thr	Val	Gly
1			5					10				15			
Leu	Leu	Met	Leu	Gly	Val	Thr	Leu	Pro	Asn	Ser	Tyr	Trp	Arg	Val	Ser
			20					25				30			
Thr	Val	His	Gly	Asn	Val	Ile	Thr	Thr	Asn	Thr	Ile	Phe	Glu	Asn	Leu
		35				40					45				
Trp	Phe	Ser	Cys	Ala	Thr	Asp	Ser	Leu	Gly	Val	Tyr	Asn	Cys	Trp	Glu
		50				55					60				
Phe	Pro	Ser	Met	Leu	Ala	Leu	Ser	Gly	Tyr	Ile	Gln	Ala	Cys	Arg	Ala
65				70					75					80	
Leu	Met	Ile	Thr	Ala	Ile	Leu	Leu	Gly	Phe	Leu	Gly	Leu	Leu	Leu	Gly
			85					90				95			
Ile	Ala	Gly	Leu	Arg	Cys	Thr	Asn	Ile	Gly	Gly	Leu	Glu	Leu	Ser	Arg
			100					105				110			
Lys	Ala	Lys	Leu	Ala	Ala	Thr	Ala	Gly	Ala	Leu	His	Ile	Leu	Ala	Gly
		115				120					125				
Ile	Cys	Gly	Met	Val	Ala	Ile	Ser	Trp	Tyr	Ala	Phe	Asn	Ile	Thr	Arg
		130				135					140				
Asp	Phe	Phe	Asp	Pro	Leu	Tyr	Pro	Gly	Thr	Lys	Tyr	Glu	Leu	Gly	Pro
145				150					155					160	
Ala	Leu	Tyr	Leu	Gly	Trp	Ser	Ala	Ser	Leu	Ile	Ser	Ile	Leu	Gly	Gly
			165					170				175			
Leu	Cys	Leu	Cys	Ser	Ala	Cys	Cys	Cys	Gly	Ser	Asp	Glu	Asp	Pro	Ala
			180					185				190			
Ala	Ser	Ala	Arg	Arg	Pro	Tyr	Gln	Ala	Pro	Val	Ser	Val	Met	Pro	Val
		195				200					205				
Ala	Thr	Ser	Asp	Gln	Glu	Gly	Asp	Ser	Ser	Phe	Gly	Lys	Tyr	Gly	Arg
		210				215					220				
Asn	Ala	Tyr	Val												

225

<210> 5719

<211> 2267

<212> DNA

<213> Homo sapiens

<400> 5719

ntgtcagcag agccctgtac cgtgcgcctc agcaaaactcc tccatctatt gctccaaggc
60
ccgcctttga tgtaggtcc tggagaaggg gaagtgggtgc gggacccaca ggtccagctg
120
ctccgtgcca tgcagtcggg aaagggaaac aggcactaat caaaggcaac tgctcactcg
180
tacctctttc ttctgaagca catgatgaag tctattctca gcagcgattt tctttacaaa
240
ctctttcgtt aatcccccca gaggggaagat ggttctcctc agggcatcct gggaaacctg
300
gcattttctaa cttcaaaccg atttctgaaa agcccttcgg gcttcttaac gtgcttctgc
360
tcaaagactt cttcatcttc cagggaagtt cttgcatagt gacctgtggc aatggcatct
420
gcccctgaac acatcattcc aatactcctt tacgtaggac acttgatgga aagggatgtc
480
taagatctgg caaactctgt aagcatcttc acagtctttg tcggcagtac agaccccatg
540
ttcatccagt gagtccaggt tcttcataaa caccctgtc acctggtaac ctctccgcct
600
cagcagcagc gcggccacgg cgctgtccac gccgccggac agggcgacac cgacgtgccg
660
caaggcctgc atccgccagt cgcctcgtcc ggcggcgtgg acagcgccgt ggcgcgctg
720
ctgctgaggg ggagagggtta ccagggtgaca ggggtgttta tgaagaactg ggactcactg
780
gatgaacatg gggctctgtac tgccgacaaa gactgtgaag atgcttacag agtttgccag
840
atcttagaca tccctttcca tcaagtgtcc tacgtaaagg agtattggaa tgatgtgttc
900
agtgactttt tgaatgagta tgaaaaagga aggactccca atcctgacat agtttgcaac
960
aagcacatca aatttagttg cttttttcat tatgotgtgg ataactttgg ggcagatgcc
1020
attgccacag gtcactatgc aagaacttcc ctggaagatg aagaagtctt tgagcagaag
1080
cacgttaaga agcccgaagg gcttttcaga aatcggtttg aagttagaaa tgcggtaaaa
1140
ctcctccagg cagctgacag ctttaagac cagaccttct ttctcagcca ggtttccag
1200
gatgccctga ggagaacat cttccctctg gggggattaa cgaaagagtt tgtaaagaaa
1260
atcgctgctg agaatagact tcatcatgtg cttcagaaga aagagagcat gggcatgtgt
1320
ttcatcgga agaggaatth tgaacatttc cttcttcagt atctgcagcc tcgacctggt
1380

cactttattt ccatagaaga caataaggtt ctgggaacac ataaaggttg gttcctgtat
 1440
 accttgggcc agagagcaaa cataggtggc ctgagagagc cctggtacgt ggtggagaag
 1500
 gacagcgtca aggggtgacgt gtttgtggcc ccccgacag accaccagc cctgtacagg
 1560
 gacctgctga ggaccagccg cgtgcactgg attgcggagg agcctccgc agcactggtc
 1620
 cgggacaaga tgatggagtg ccacttccga ttccgccacc agatggcact agtgcctgt
 1680
 gtgctgaccc tcaatcaaga tggcaccgtg tgggtgacag ctgtgcaggc tgtgctgccc
 1740
 cttgccacag gacagtttgc tgtgttctac aagggggacg agtgcctggg cagcgggaag
 1800
 atcctgcggc tggggccgtc tgcctacacg ctccagaagg gccagcgag agctgggatg
 1860
 gccactgaga gccccagtga cagcccagaa gatggtccag gcctgagtcc cttgctctga
 1920
 cagagatgga tctgctagaa ggaacctgga gagcaggacc catggctggg cggctgggtga
 1980
 gcagtccagg tgcceaaggg ccagcttctg gctgcccaga gcagaggaag cgggctggg
 2040
 tgagggtccg aaaagcctgc aggggcccgg cgagcccag gaagagctc agctccaggc
 2100
 tggggctctg gctgctggag catctgctgg ctggtggggg ggcccagatt ccccttcacc
 2160
 gccccaggg aggggtttccc acctcagagt acaccagggg gacctgcaga gggggctgtc
 2220
 gggacagcgt ggaataaaca ttatttcaag gaaaaaaaaa aaaaaaa
 2267

<210> 5720

<211> 455

<212> PRT

<213> Homo sapiens

<400> 5720

Val	Pro	Val	Leu	His	Lys	His	Pro	Cys	His	Leu	Val	Thr	Ser	Pro	Pro
1				5					10					15	
Gln	Gln	Gln	Arg	Gly	His	Gly	Ala	Val	His	Ala	Ala	Gly	Gln	Gly	Ala
			20					25					30		
His	Asp	Val	Pro	Gln	Gly	Leu	His	Pro	Pro	Val	Ala	Pro	Ser	Gly	Gly
	35					40					45				
Val	Asp	Ser	Ala	Val	Ala	Ala	Leu	Leu	Leu	Arg	Arg	Arg	Gly	Tyr	Gln
	50				55					60					
Val	Thr	Gly	Val	Phe	Met	Lys	Asn	Trp	Asp	Ser	Leu	Asp	Glu	His	Gly
65					70				75					80	
Val	Cys	Thr	Ala	Asp	Lys	Asp	Cys	Glu	Asp	Ala	Tyr	Arg	Val	Cys	Gln
			85					90						95	
Ile	Leu	Asp	Ile	Pro	Phe	His	Gln	Val	Ser	Tyr	Val	Lys	Glu	Tyr	Trp
	100							105				110			
Asn	Asp	Val	Phe	Ser	Asp	Phe	Leu	Asn	Glu	Tyr	Glu	Lys	Gly	Arg	Thr
	115					120					125				
Pro	Asn	Pro	Asp	Ile	Val	Cys	Asn	Lys	His	Ile	Lys	Phe	Ser	Cys	Phe

```

      130              135              140
Phe His Tyr Ala Val Asp Asn Leu Gly Ala Asp Ala Ile Ala Thr Gly
145              150              155              160
His Tyr Ala Arg Thr Ser Leu Glu Asp Glu Glu Val Phe Glu Gln Lys
      165              170              175
His Val Lys Lys Pro Glu Gly Leu Phe Arg Asn Arg Phe Glu Val Arg
      180              185              190
Asn Ala Val Lys Leu Leu Gln Ala Ala Asp Ser Phe Lys Asp Gln Thr
      195              200              205
Phe Phe Leu Ser Gln Val Ser Gln Asp Ala Leu Arg Arg Thr Ile Phe
      210              215              220
Pro Leu Gly Gly Leu Thr Lys Glu Phe Val Lys Lys Ile Ala Ala Glu
225              230              235              240
Asn Arg Leu His His Val Leu Gln Lys Lys Glu Ser Met Gly Met Cys
      245              250              255
Phe Ile Gly Lys Arg Asn Phe Glu His Phe Leu Leu Gln Tyr Leu Gln
      260              265              270
Pro Arg Pro Gly His Phe Ile Ser Ile Glu Asp Asn Lys Val Leu Gly
      275              280              285
Thr His Lys Gly Trp Phe Leu Tyr Thr Leu Gly Gln Arg Ala Asn Ile
      290              295              300
Gly Gly Leu Arg Glu Pro Trp Tyr Val Val Glu Lys Asp Ser Val Lys
305              310              315              320
Gly Asp Val Phe Val Ala Pro Arg Thr Asp His Pro Ala Leu Tyr Arg
      325              330              335
Asp Leu Leu Arg Thr Ser Arg Val His Trp Ile Ala Glu Glu Pro Pro
      340              345              350
Ala Ala Leu Val Arg Asp Lys Met Met Glu Cys His Phe Arg Phe Arg
      355              360              365
His Gln Met Ala Leu Val Pro Cys Val Leu Thr Leu Asn Gln Asp Gly
      370              375              380
Thr Val Trp Val Thr Ala Val Gln Ala Val Arg Ala Leu Ala Thr Gly
385              390              395              400
Gln Phe Ala Val Phe Tyr Lys Gly Asp Glu Cys Leu Gly Ser Gly Lys
      405              410              415
Ile Leu Arg Leu Gly Pro Ser Ala Tyr Thr Leu Gln Lys Gly Gln Arg
      420              425              430
Arg Ala Gly Met Ala Thr Glu Ser Pro Ser Asp Ser Pro Glu Asp Gly
      435              440              445
Pro Gly Leu Ser Pro Leu Leu
      450              455

```

<210> 5721

<211> 400

<212> DNA

<213> Homo sapiens

<400> 5721

```

ttagacatag ctaaccagac aggcagatca atcagaattc ccccatcaga aagaaaagcc
60
cttatgtag ctatgggata tcatgagaag ggcagagctt tcctgaaaag aaaagaatat
120
ggaatagcct tgccatgtct gttggacgct gacaaatatt tctggtgggc gcttttgtac
180

```

ttggtgaaca ccagctttaa ggaagatggc ccagactata cagaacacct gccatgccct
 240
 tgagactgca gactttcatc tacaacagtg gttaatgtaa aagagtagtt atggtgtaaa
 300
 ctggtgaatt tcttcttccc tttgtatttc taattgacct ttcctccctg taaagaaaag
 360
 aattttcaag caggtaggat atgctctctt tttctgtaca
 400

<210> 5722
 <211> 80
 <212> PRT
 <213> Homo sapiens

<400> 5722
 Leu Asp Ile Ala Asn Gln Thr Gly Arg Ser Ile Arg Ile Pro Pro Ser
 1 5 10 15
 Glu Arg Lys Ala Leu Met Leu Ala Met Gly Tyr His Glu Lys Gly Arg
 20 25 30
 Ala Phe Leu Lys Arg Lys Glu Tyr Gly Ile Ala Leu Pro Cys Leu Leu
 35 40 45
 Asp Ala Asp Lys Tyr Phe Trp Trp Ala Leu Leu Tyr Leu Val Asn Thr
 50 55 60
 Ser Phe Lys Glu Asp Gly Pro Asp Tyr Thr Glu His Leu Pro Cys Pro
 65 70 75 80

<210> 5723
 <211> 376
 <212> DNA
 <213> Homo sapiens

<400> 5723
 nntaccacat tttcttcttt tcacccaccc cagccaaaac tcagtgcctt caaggctcgg
 60
 aagaatgtgg agagttttct agaagcctgt cgaaaaatgg gggatgcctga ggtatggggg
 120
 ctgctttcta aagagtgggtg gcattgccga ctcagcggag ccatgtggca tggatgggtg
 180
 gcttccattt gcagcggatg tctgctctca gatgaaggca caggctgccc ctgctgccc
 240
 cagcatgccc cctgccctgc atgccccctg cctgcatgt cacctgtcct acacatcccc
 300
 tgcctgcag gcccattctt gtctgcatg tcacctgtcc tgcacatgcc ctgccctgca
 360
 ctctctctgc acgcgt
 376

<210> 5724
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 5724
 Xaa Thr Thr Phe Ser Ser Phe His Pro Pro Gln Pro Lys Leu Ser Ala

1	5	10	15
Leu Lys Ala Arg Lys Asn Val Glu Ser Phe Leu Glu Ala Cys Arg Lys			
20	25	30	
Met Gly Val Pro Glu Val Trp Gly Leu Leu Ser Lys Glu Trp Trp His			
35	40	45	
Ala Gly Leu Ser Gly Ala Met Trp His Gly Trp Trp Ala Ser Ile Cys			
50	55	60	
Ser Gly Cys Leu Leu Ser Asp Glu Gly Thr Gly Cys Pro Cys Leu Pro			
65	70	75	80
Gln His Ala Pro Cys Pro Ala Cys Pro Leu Pro Cys Met Ser Pro Val			
85	90	95	
Leu His Ile Pro Cys Pro Ala Gly Pro Ile Leu Ser Cys Met Ser Pro			
100	105	110	
Val Leu His Met Pro Cys Pro Ala Leu Leu Leu His Ala			
115	120	125	

<210> 5725

<211> 1160

<212> DNA

<213> Homo sapiens

<400> 5725

gcttttttttc cttttctccc tccgcgtctc ctttttgact ccctcccctt ttatgctcgc
60
ccagccctcc ccctgctgct gagaagtggg ggagggtctc ggccctcagg ttcccgcgcc
120
accgcgcacg ggcgagcatg gggggcaagc agagcacggc gaccgcctcc cggggggcccc
180
ttcccggggg tctccaccga tgacagcgcc gtgccgcgcg cgggaggggc gccccatttc
240
gggcactacc ggacggggcg cggggccatg gggctgcgca gcgcatcggt cagctcgggtg
300
gcaggcatgg gcatggaccc cagcacggcc ggggggggtgc cttttggcct ctacaccccc
360
gcctcccggg gcaccggcga ctccgagagg gcgcccggcg gcggagggtc tgcgtccgac
420
tccacctatg cccatggcaa tggttaccag gagacggggc gcggtcacca tagagacggg
480
atgctgtacc tgggctcccg agcctcgctg gcggatgctc tacctctgca catcgcaccc
540
aggtggttca gctcgcatag tggtttcaag tgccccattt gctccaagtc tgtggcttct
600
gacgagatgg aaatgcactt tataatgtgt ttgagcaaac ctgcctctc ctacaacgat
660
gatgtgctga ctaaagacgc gggtagtgt gtgatctgcc tggaggagct gctgcagggg
720
gacacgatag ccaggctgcc ctgcctgtgc atctatcaca aaagctgcat agactcgtgg
780
tttgaagtga acagatcttg tccggaacac cctgcggact gacctcggg cttgcttgct
840
gactcctctc aaagggacag agcgcccctg ctccagggag gaggctcacc ggaccctggg
900
gcagagctga gcttgggaca ccagcgggaa cagggcaccc cttctgcact gacttccaga
960

tcattggttct cccttcctcc ctgaggacac caaattggat gagagcaagt ttgagagaag
 1020
 aatgaatcaa ctgctatcct tcccctcacc cctcagccca ggagggaaaag ggcattttct
 1080
 ttttcattctt tgaaaggcat tgtgggtctg tctttaaagt gtttacaaaa aaattatata
 1140
 aaaaaaagtc tagtgtcgac
 1160

<210> 5726

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5726

Ala	Phe	Phe	Pro	Phe	Leu	Pro	Pro	Arg	Leu	Leu	Phe	Asp	Ser	Leu	Pro
1				5					10					15	
Leu	Tyr	Ala	Arg	Pro	Ala	Leu	Pro	Leu	Leu	Leu	Arg	Ser	Gly	Gly	Gly
			20					25					30		
Ser	Arg	Pro	Pro	Gly	Ser	Arg	Pro	Thr	Ala	His	Gly	Arg	Ala	Trp	Gly
		35					40					45			
Ala	Ser	Arg	Ala	Arg	Arg	Pro	Ala	Pro	Gly	Gly	Pro	Phe	Pro	Gly	Val
	50					55					60				
Ser	Thr	Asp	Asp	Ser	Ala	Val	Pro	Pro	Pro	Gly	Gly	Ala	Pro	His	Phe
65					70					75				80	
Gly	His	Tyr	Arg	Thr	Gly	Gly	Gly	Ala	Met	Gly	Leu	Arg	Ser	Ala	Ser
			85						90					95	
Val	Ser	Ser	Val	Ala	Gly	Met	Gly	Met	Asp	Pro	Ser	Thr	Ala	Gly	Gly
			100					105					110		
Val	Pro	Phe	Gly	Leu	Tyr	Thr	Pro	Ala	Ser	Arg	Gly	Thr	Gly	Asp	Ser
		115					120					125			
Glu	Arg	Ala	Pro	Gly	Gly	Gly	Gly	Ser	Ala	Ser	Asp	Ser	Thr	Tyr	Ala
	130					135					140				
His	Gly	Asn	Gly	Tyr	Gln	Glu	Thr	Gly	Gly	Gly	His	His	Arg	Asp	Gly
145					150					155				160	
Met	Leu	Tyr	Leu	Gly	Ser	Arg	Ala	Ser	Leu	Ala	Asp	Ala	Leu	Pro	Leu
			165						170					175	
His	Ile	Ala	Pro	Arg	Trp	Phe	Ser	Ser	His	Ser	Gly	Phe	Lys	Cys	Pro
			180					185					190		
Ile	Cys	Ser	Lys	Ser	Val	Ala	Ser	Asp	Glu	Met	Glu	Met	His	Phe	Ile
		195					200					205			
Met	Cys	Leu	Ser	Lys	Pro	Arg	Leu	Ser	Tyr	Asn	Asp	Asp	Val	Leu	Thr
	210					215					220				
Lys	Asp	Ala	Gly	Glu	Cys	Val	Ile	Cys	Leu	Glu	Glu	Leu	Leu	Gln	Gly
225					230					235				240	
Asp	Thr	Ile	Ala	Arg	Leu	Pro	Cys	Leu	Cys	Ile	Tyr	His	Lys	Ser	Cys
			245						250					255	
Ile	Asp	Ser	Trp	Phe	Glu	Val	Asn	Arg	Ser	Cys	Pro	Glu	His	Pro	Ala
			260					265					270		

Asp

<210> 5727

<211> 1237

<212> DNA

<213> Homo sapiens

<400> 5727

ntgagaaggg aggtgaccac caggactggc tctgtgagta ccacacagtg ggaggggggtg
60
ggggccacca tgtcatcata tcagaaggaa ctggagaaat acagagacat agatgaagat
120
gagatcctaa ggaccttgag ccccaggag ctagagcagc tggactgcga actacaggag
180
atggatcctg agaacatgct cctgccagct ggactaagac aacgtgacca gacaaagaag
240
agcccaacgg ggccactgga ccgagaggcc cttttgcagt acttgagca acaggcacta
300
gaagtcaaag agcgtgatga cttggtgccc ttcacaggcg agaagaagg gaaaccctat
360
attcagccca agagggaaat ccagcagag gagcagatca ccctggagcc tgagctggag
420
gaggcactgg cacatgccac agatgctgaa atgtgtgaca ttgcagcaat tctggacatg
480
tacacactga tgagtaacaa gcaatactat gatgccctct gcagtggaga aatctgcaac
540
actgaaggca ttagcagtgt ggtacagcct gacaagtata agccagtgcc ggatgaaccc
600
ccaaatccca caaacattga ggagatacta aagaggggtcc gaagcaatga caaggagctg
660
gaggaggtga acttgaataa tatacaggac atcccaatac ccatgctaag tgagctgtgt
720
gaggcaatga aggcaaatac ctatgtgcgg agcttcagtc tggtagccac gaggagtgg
780
gacccattg ccaatgcagt ggctgacatg ttgcgtgaga atcgtagcct ccagagccta
840
aacatcgaat ccaacttcat tagcagcaca ggactcatgg ctgtgctgaa ggcagttcgg
900
gaaaatgcc cactcactga gctccgtgta gacaatcagc gccagtggcc tggatgatgca
960
gtggagatgg agatggccac cgtgctagag cagtgtccct ctattgtccg ctttggctac
1020
cactttacac agcaggggcc acgagctcgg gcagcccagg ccatgacccg aaacaatgaa
1080
ctacgtcgcc agcaaaagaa gagataacac tgcatttccc ttaccaact agcgtggga
1140
gcactggaca cttaaatect catctgtcct cctttcctgt aaataaaagc ctttctatcc
1200
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
1237

<210> 5728

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5728

Xaa Arg Arg Glu Val Thr Thr Arg Thr Gly Ser Val Ser Thr Thr Gln

1				5				10				15	
Trp	Glu	Gly	Val	Gly	Ala	Thr	Met	Ser	Ser	Tyr	Gln	Lys	Glu
			20					25				30	
Lys	Tyr	Arg	Asp	Ile	Asp	Glu	Asp	Glu	Ile	Leu	Arg	Thr	Leu
		35					40				45		Pro
Glu	Glu	Leu	Glu	Gln	Leu	Asp	Cys	Glu	Leu	Gln	Glu	Met	Asp
	50					55					60		Glu
Asn	Met	Leu	Leu	Pro	Ala	Gly	Leu	Arg	Gln	Arg	Asp	Gln	Thr
65					70				75				Lys
Ser	Pro	Thr	Gly	Pro	Leu	Asp	Arg	Glu	Ala	Leu	Leu	Gln	Tyr
			85					90				95	Leu
Gln	Gln	Ala	Leu	Glu	Val	Lys	Glu	Arg	Asp	Asp	Leu	Val	Pro
		100						105				110	Phe
Gly	Glu	Lys	Lys	Gly	Lys	Pro	Tyr	Ile	Gln	Pro	Lys	Arg	Glu
		115					120				125		Ile
Ala	Glu	Glu	Gln	Ile	Thr	Leu	Glu	Pro	Glu	Leu	Glu	Ala	Leu
	130					135				140			Ala
His	Ala	Thr	Asp	Ala	Glu	Met	Cys	Asp	Ile	Ala	Ala	Ile	Leu
145				150					155				Asp
Tyr	Thr	Leu	Met	Ser	Asn	Lys	Gln	Tyr	Tyr	Asp	Ala	Leu	Cys
			165					170				175	Ser
Glu	Ile	Cys	Asn	Thr	Glu	Gly	Ile	Ser	Ser	Val	Val	Gln	Pro
		180						185				190	Asp
Tyr	Lys	Pro	Val	Pro	Asp	Glu	Pro	Pro	Asn	Pro	Thr	Asn	Ile
	195					200				205			Glu
Ile	Leu	Lys	Arg	Val	Arg	Ser	Asn	Asp	Lys	Glu	Leu	Glu	Val
	210					215				220			Asn
Leu	Asn	Asn	Ile	Gln	Asp	Ile	Pro	Ile	Pro	Met	Leu	Ser	Glu
225				230					235				Leu
Glu	Ala	Met	Lys	Ala	Asn	Thr	Tyr	Val	Arg	Ser	Phe	Ser	Leu
		245						250				255	Val
Thr	Arg	Ser	Gly	Asp	Pro	Ile	Ala	Asn	Ala	Val	Ala	Asp	Met
		260						265				270	Leu
Glu	Asn	Arg	Ser	Leu	Gln	Ser	Leu	Asn	Ile	Glu	Ser	Asn	Phe
	275					280				285			Ile
Ser	Thr	Gly	Leu	Met	Ala	Val	Leu	Lys	Ala	Val	Arg	Glu	Asn
	290					295				300			Ala
Leu	Thr	Glu	Leu	Arg	Val	Asp	Asn	Gln	Arg	Gln	Trp	Pro	Gly
305				310					315				Asp
Val	Glu	Met	Glu	Met	Ala	Thr	Val	Leu	Glu	Gln	Cys	Pro	Ser
		325						330				335	Ile
Arg	Phe	Gly	Tyr	His	Phe	Thr	Gln	Gln	Gly	Pro	Arg	Ala	Arg
		340					345				350		Ala
Gln	Ala	Met	Thr	Arg	Asn	Asn	Glu	Leu	Arg	Arg	Gln	Gln	Lys
	355						360				365		Arg

<210> 5729

<211> 381

<212> DNA

<213> Homo sapiens

<400> 5729

naaatttatt actacggatc acagcagcaa cgggcgggaa gggcgggccc agactcattt
60

gccccgcagg tagatcttgg gggctctgcc a gccttcgggg gcttccttta gccccgcctt
 120
 cagccagatg cgcctcaggt ctttctcgaa cttgatctgc aagacgcaga gagagggacc
 180
 gccaaagtaat tcgtggcaaa gaaacgtggt ctcagcactt tgccctccca gggccaagca
 240
 gggggccact cacctgcttg cgtctcaggg gtcctctctg gaccttcttc cgcaggaacc
 300
 gcgtcttctt caccagcttc cgggtacttg ggtgggtcat cttccgccgg cggatcttca
 360
 gcacgttttt gcactaaatt t
 381

<210> 5730

<211> 64

<212> PRT

<213> Homo sapiens

<400> 5730

Phe	Val	Ala	Lys	Lys	Arg	Val	Leu	Ser	Thr	Leu	Pro	Ser	Gln	Gly	Gln
1				5					10					15	
Ala	Gly	Gly	His	Ser	Pro	Ala	Cys	Val	Ser	Gly	Val	Pro	Pro	Gly	Pro
			20					25					30		
Ser	Ser	Ala	Gly	Thr	Ala	Ser	Ser	Ser	Pro	Ala	Ser	Gly	Thr	Cys	Gly
		35					40					45			
Gly	Ser	Ser	Ser	Ala	Gly	Gly	Ser	Ser	Ala	Arg	Phe	Cys	Thr	Lys	Phe
		50				55					60				

<210> 5731

<211> 891

<212> DNA

<213> Homo sapiens

<400> 5731

ccggccgcgt ccaggctgcg ggccgaagcc gggctcgggg cgctgccgcg gcgggcgctc
 60
 gccagctact tgctcttctt cgggctctac ccggtgctca ccaaggcggc caccagtggc
 120
 attttgtcag cacttgggaa cttcctggcc cagatgattg agaagaagcg gaaaaaagaa
 180
 aactctagaa gtctggatgt cgggtggcct ctgagatatg ccgtttacgg gttcttcttc
 240
 acagggccgc tgagtcactt cttctacttc ttcattggaac attggatccc tctgaggtc
 300
 cccctggcag ggctcaggag gcttctcttg gaccgcctcg tctttgcacc ggcttcttc
 360
 atgttgttct tcctcatcat gaactttctg gaggggaaag acgcctcagc cttcgccgcc
 420
 aagatgaggg ggggcttctg gccggcgctg aggatgaact ggccgggtgtg gacgccacta
 480
 cagttcatca acatcaacta cgtccctctg aagttccggg tgctcttctc caacctggca
 540
 gctctgttct ggtatgccta cctggcctcc ttggggaagt gacgaccgct gggagaacat
 600

cagggtgcact gtggacgtgg gtctgggggt ctcacccgcc cagcgagagc agaaccaatc
 660
 cagtcaggat gtcactgact ctaaatacagg tgattcaaga tgcccaaaaa tgatggatag
 720
 agaaacagaa atctctgaat gtcagaaccc tgtcttttaa aaaggcagtc actgccttca
 780
 ggtggtgctg cccagaaaac ttaaaattta gtcgaggcag tttcaattgt tactgtggac
 840
 cgaattagga tcacaataaa tgataatgca gggtcttcaa aaaaaaaaaa a
 891

<210> 5732
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 5732
 Pro Ala Ala Ser Arg Leu Arg Ala Glu Ala Gly Leu Gly Ala Leu Pro
 1 5 10 15
 Arg Arg Ala Leu Ala Gln Tyr Leu Leu Phe Leu Arg Leu Tyr Pro Val
 20 25 30
 Leu Thr Lys Ala Ala Thr Ser Gly Ile Leu Ser Ala Leu Gly Asn Phe
 35 40 45
 Leu Ala Gln Met Ile Glu Lys Lys Arg Lys Lys Glu Asn Ser Arg Ser
 50 55 60
 Leu Asp Val Gly Gly Pro Leu Arg Tyr Ala Val Tyr Gly Phe Phe Phe
 65 70 75 80
 Thr Gly Pro Leu Ser His Phe Phe Tyr Phe Phe Met Glu His Trp Ile
 85 90 95
 Pro Pro Glu Val Pro Leu Ala Gly Leu Arg Arg Leu Leu Leu Asp Arg
 100 105 110
 Leu Val Phe Ala Pro Ala Phe Leu Met Leu Phe Phe Leu Ile Met Asn
 115 120 125
 Phe Leu Glu Gly Lys Asp Ala Ser Ala Phe Ala Ala Lys Met Arg Gly
 130 135 140
 Gly Phe Trp Pro Ala Leu Arg Met Asn Trp Arg Val Trp Thr Pro Leu
 145 150 155 160
 Gln Phe Ile Asn Ile Asn Tyr Val Pro Leu Lys Phe Arg Val Leu Phe
 165 170 175
 Ala Asn Leu Ala Ala Leu Phe Trp Tyr Ala Tyr Leu Ala Ser Leu Gly
 180 185 190
 Lys

<210> 5733
 <211> 950
 <212> DNA
 <213> Homo sapiens

<400> 5733
 nnccacgtcg tcattctccc cggggacggt gggagtgagg cggccgcat cagcttcaca
 60
 ggggccttga aaattccagg cgtgatagag ttctcactgt gtctgctgtt tgccaagctg
 120

gtcagctata ctttctctct ctggctgccc ctgtacatca cgaatgtgga tcaccttgat
 180
 gccaaaaagg cgggggtgcac aggtagcccc gacctctca ggcattccag ccacagaaca
 240
 tcaaagttag cgagtactgc gctggctgtg gcttcagaga acctgtatgt gccacgtgga
 300
 aaaacaggac accagagccc accagacagt gccggccagc agagaagcag agagccagcg
 360
 ccacacaaca tcaagaaggc cgacaaccag gttggaaacc aagacggagc tcagacccac
 420
 cacatcgccc cagaggcttt tccagcacc atgatgttcc ggactgacct aaaaaactaat
 480
 tgtcgagaag ccaaggggtga ggaggcagga agcacctccg gttggaggca cccaggcttg
 540
 ccagccacag agcgccccga agtcaccgtc atcccagccc ctggccttcc tgccgccttc
 600
 cggggccatg gcgctgctgt tcagctcagg cacaggggca cagcagaggt ttgggaagcg
 660
 gtctcccccac cggcactggg attggcgggt ccaagcccag caaccggctt cgctccacaa
 720
 cacacaccac acctgggact gtttttaata catagcaaca gactgggtta tttatttaag
 780
 atgtgtattg tgtcatatga agtttaagag acataaatgg cattttgtta tttattaaga
 840
 caaactccaa ttgttctctg gctgtttttt tcagttgtgt ctagcaaaat acttatctgc
 900
 cctttgaaat aaaatgtttt tgttttaaaa atctcaaaaa aaaaaaaaaa
 950

<210> 5734

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5734

Xaa	His	Val	Val	Ile	Leu	Pro	Gly	Asp	Gly	Gly	Ser	Gly	Thr	Ala	Ala
1				5				10					15		
Ile	Ser	Phe	Thr	Gly	Ala	Leu	Lys	Ile	Pro	Gly	Val	Ile	Glu	Phe	Ser
			20					25					30		
Leu	Cys	Leu	Leu	Phe	Ala	Lys	Leu	Val	Ser	Tyr	Thr	Phe	Leu	Phe	Trp
			35					40					45		
Leu	Pro	Leu	Tyr	Ile	Thr	Asn	Val	Asp	His	Leu	Asp	Ala	Lys	Lys	Ala
			50					55				60			
Gly	Cys	Thr	Gly	Ser	Pro	Asp	Pro	Leu	Arg	His	Ser	Ser	His	Arg	Thr
65					70				75					80	
Ser	Lys														

<210> 5735

<211> 4241

<212> DNA

<213> Homo sapiens

<400> 5735

ctagaattca gcggccgctg aattctagcg agcaggcggc aggcacggtc cgtgcggagc
60
aggcgagcga gcggaagac gcagccacct tcctcaccag ccagcccaca gcggtttgtt
120
ccccttctcg ggagtgcgcc aatgcctggg ccgacccaaa ccctgtcccc aaatggcgag
180
aacaacaacg acatcatcca ggataataac gggaccatca ttcctttccg gaagcacaca
240
gtgcgcgggg agcgttccta cagttgggga atggcgggtca atgtgtattc tacctcgata
300
acccaagaga ctatgagcag acatgacatc attgcatggg ttaatgacat agtatcttta
360
aactacacaa aagtggaaca gctttgttca ggagcggcct attgccaatt catggacatg
420
ctcttccttg gctgcattag tttgaagaaa gtaaaatttc aagcaaagct ggaacatgaa
480
tatattcaca attttaaact tctgcaagca tcatttaagc gaatgaacgt tgataaggta
540
attccagtgg agaagctagt gaaaggacgt ttccaggaca acctggattt tattcaatgg
600
tttaagaaat tctatgatgc taactacgat ggaaggaggt atgatcctgt agaggcacga
660
caagggcaag atgcaattcc tcctcctgac cctggtgaac agatcttcaa cctgccaaaa
720
aagtctcacc atgcaaactc cccacagca ggtgcagcta aatcaagtcc agcagctaaa
780
ccaggatcca caccttctcg accctcatca gccaaaaggg cttcttccag tggctcagca
840
tccaaatccg ataaagattt agaaacgcag gtcatacagc ttaatgaaca ggtacattca
900
ttaaacttg ccttgaagg cgtggaaaag gaaagggtt tctactttgg gaagttgaga
960
gagatcgagc tactctgcca agaacacggg caggaaaatg atgacctcgt gcagagacta
1020
atggacatcc tgtatgcttc agaagaacac gagggccaca cagaagagcc ggaagcagag
1080
gagcaagccc acgaacagca gccccgcag caggaagagt actgaccac cccggctgct
1140
cttgacactt ccattgtgtg tgggaacggt tcttctggag aattggaaca tgtgtggccc
1200
caagctcaac agaaaccagt tgttcccaat ctgccgttac catcaacgca ctgttgcata
1260
tgccagcac tgcgcttggg tcccatttct tttgccaagg tgtattagcg gacggccctc
1320
tgccaccta cccgagagat cgtagggtca catacatcca acttcaccac ttggctgctt
1380
gagattggtt ctgctctttt cttcatttct ttccagaaca actctttccc accccaacac
1440
cactgccacc acccctcttt ttatcctggg gtgaaacaat ggtaatttga tatatggtat
1500
ttatattggc atttttcaac ccagtgtcac tagatgtcac acacatttgt ggtgctttga
1560
tgtttgcaag tctaacctct gaacataaat ttgggtcaaat aattggaaca aagggaaca
1620

gataacttgat atgaaagcca taatgacggt gacttgtgtc gtgggggaaa acataaggtc
1680
attttctccc tctactcaca atactaaagg gaaaaaatgg attcaaagct aggatttcag
1740
ggcccagcag tgttctcca tcagcatggt agacaactac acagtatggt gttagttttg
1800
aaagacattc actcaaggaa aacaccatct caactttgcc cgctcaccat gtcccttgcc
1860
cccatgtagc ccatttccca gggtatgctc ttttcttctc cagggtcctc tttggtgggc
1920
agccactccc cgagatgttg ccatcagttt tctgcagtcc aaagagggta tggttaggtg
1980
cgggtcttcc tgcctcattc ctcttctctt ttgtgtaggt ttcagccaca aaactgtcat
2040
tcaacttagg ggaccctac taaagggtaa cttcaggtgt gcagccctga gctccaaggc
2100
tctgcaccat gccacacact tgctgtaagg ctagaagtga agaccttatt aataggagca
2160
taattgagag ggagaatcat gggtctgcag tctggtgtag acactggaat aacagcacag
2220
aaaaatctat gactcccaat atcttctaga ataaagaatt ttccctcttt aacacaaggg
2280
ccctccttgt cattgacctt agctaaacca tggcaattca taaatagagg aaacattaat
2340
gaattaaaag cattccttat tttttaacta atatttgtac attttcttag tctctttcca
2400
agtctttgcc tctttttttt ctttattttt attttttcct ttgacagatg gtatcccttc
2460
ctggatcatt catttcacct tggtttctaa ctttaggttt actttcactt gttatttgac
2520
ttagcaggtg caacaaaaac aagaaacaaa tgtgcccacc ccactttccg cttaactgaa
2580
aagcttaaaa taaatttctg aattatgtat cctgaagctt tgaaatttct ttattaatcg
2640
atgaaatatg aattctaaat tctagcattg aagcttttca ccaaagaag tctctccaaa
2700
ataaatcttt tgcagcaaag tgatatttat tgagtattgt ggaaaagatg gcttgatatt
2760
ttcagattat tacaacacac tgtgcagaat tagacagatg ttccgtgggtg tttggtttcc
2820
ctttcttctc tctctgtctc actctgcatt atagcagcag cttatttctc taaggctgga
2880
cagcctggct ctcggcagtg acgtcctccc acacctggct acaagtagta gtggctgtgc
2940
tatacccagc atcatgttta acagcgtgtt gcccttctga gcctgttgta ctactgatc
3000
tctttaaaaa caaaaaatag ctcttgtaaa aggtcacaat aactctatgc acctgatact
3060
gcagtgggtc ctaggccatt cttcatctgc tctggacatc tcagtcatac ccaatgctca
3120
gtggatcatg accaaactcc tgtcatgtgg atgcacgtga gtgggtagca gggagtcagg
3180
atcctgcctt ctccagcaac cccttactgc tgtataactt gcataagcct ccctggtgac
3240

tcttgagga accactccat tgcctccag ctcccagcc ttctcagtta taaacatgct
 3300
 ggccagatct cttagcctgc aaagagaact ttcccagtc accatagacc attctccttc
 3360
 ctgaaggctt ggggcagacc attcgtttat ttagagaaga gctatacatt cttctttctg
 3420
 gtcccatctt aaacgtcttc tgttgtgctg caccacagat ggtgtctcag atgctttggg
 3480
 gaatctttaa cagctgaatt tgagtcagtc ctcttaggct gcacctccag cctctgcaga
 3540
 tccccctca tttcccatgg atggtgggac cccattattc tctcatctcg gcattcaggg
 3600
 aacagtttcc ttagcggccc ctggtccat gtcacgggc tgggcaggaa gcgtccctgg
 3660
 gtgcgtgctc cacttctccc tctcaggaag cccagtttca tccttagtac cccccctcgt
 3720
 gcccgctgct ggctgggtat agcacttcca ctgctactgt cagataggaa gtgatcgaag
 3780
 cagggggcaa agagaaagcc catatttggt ctaagcagaa aagcaggaaa aaaaaaaaaa
 3840
 aagaaagaaa aacacctggt gacctgagag aagtaaattc cagaaggga ccaagaactc
 3900
 ttcccttccc tggtagtat ttccattatt ccgttaaggt ttaatatgca ttcagattac
 3960
 ttttactaaa taggacacca taaagctttt gttatatatt aaatgtaaac tgaaaggaat
 4020
 gtaaacaat gtattgttaa ttataaatat agataagtaa tgacataata gatgaaaaag
 4080
 tcttattcag atgtatcaca ttcattttac attaccacc tattgtcgca tggtagaata
 4140
 gttttttgct tctgaatatg tgaataaact gacttgcatt gatcttttta catatttaat
 4200
 aaaaaaaaaa gtatatgtta aaaaaaaaaa aaaaaaaaaa a
 4241

<210> 5736

<211> 327

<212> PRT

<213> Homo sapiens

<400> 5736

Met	Pro	Gly	Pro	Thr	Gln	Thr	Leu	Ser	Pro	Asn	Gly	Glu	Asn	Asn	Asn
1				5					10					15	
Asp	Ile	Ile	Gln	Asp	Asn	Asn	Gly	Thr	Ile	Ile	Pro	Phe	Arg	Lys	His
			20					25					30		
Thr	Val	Arg	Gly	Glu	Arg	Ser	Tyr	Ser	Trp	Gly	Met	Ala	Val	Asn	Val
		35					40					45			
Tyr	Ser	Thr	Ser	Ile	Thr	Gln	Glu	Thr	Met	Ser	Arg	His	Asp	Ile	Ile
	50					55					60				
Ala	Trp	Val	Asn	Asp	Ile	Val	Ser	Leu	Asn	Tyr	Thr	Lys	Val	Glu	Gln
65					70					75				80	
Leu	Cys	Ser	Gly	Ala	Ala	Tyr	Cys	Gln	Phe	Met	Asp	Met	Leu	Phe	Pro
				85					90					95	
Gly	Cys	Ile	Ser	Leu	Lys	Lys	Val	Lys	Phe	Gln	Ala	Lys	Leu	Glu	His

```

      100      105      110
Glu Tyr Ile His Asn Phe Lys Leu Leu Gln Ala Ser Phe Lys Arg Met
      115      120      125
Asn Val Asp Lys Val Ile Pro Val Glu Lys Leu Val Lys Gly Arg Phe
      130      135      140
Gln Asp Asn Leu Asp Phe Ile Gln Trp Phe Lys Lys Phe Tyr Asp Ala
145      150      155      160
Asn Tyr Asp Gly Lys Glu Tyr Asp Pro Val Glu Ala Arg Gln Gly Gln
      165      170      175
Asp Ala Ile Pro Pro Pro Asp Pro Gly Glu Gln Ile Phe Asn Leu Pro
      180      185      190
Lys Lys Ser His His Ala Asn Ser Pro Thr Ala Gly Ala Ala Lys Ser
      195      200      205
Ser Pro Ala Ala Lys Pro Gly Ser Thr Pro Ser Arg Pro Ser Ser Ala
      210      215      220
Lys Arg Ala Ser Ser Ser Gly Ser Ala Ser Lys Ser Asp Lys Asp Leu
225      230      235      240
Glu Thr Gln Val Ile Gln Leu Asn Glu Gln Val His Ser Leu Lys Leu
      245      250      255
Ala Leu Glu Gly Val Glu Lys Glu Arg Asp Phe Tyr Phe Gly Lys Leu
      260      265      270
Arg Glu Ile Glu Leu Leu Cys Gln Glu His Gly Gln Glu Asn Asp Asp
      275      280      285
Leu Val Gln Arg Leu Met Asp Ile Leu Tyr Ala Ser Glu Glu His Glu
      290      295      300
Gly His Thr Glu Glu Pro Glu Ala Glu Glu Gln Ala His Glu Gln Gln
305      310      315      320
Pro Pro Gln Gln Glu Glu Tyr
      325

```

<210> 5737

<211> 340

<212> DNA

<213> Homo sapiens

<400> 5737

```

ncaccccccc tggatgtggc tcttcggata tgcctttccc acggagccca gagacaaatg
60
tgcggtggccc tgggacagct ggaccggcct ccagacctcg cccatgacgg gaggagtctg
120
tggtgaaca tcaggggcaa ggaggcggct gcccaatcca tgttccatgt ctccacgcca
180
ctgccagtga tgaccggtgg tttcctgatg tacctgagag ggcagctgga gcctcagtgg
240
aagatgttgc agtgccatcc tcacctggtg gcttgaaatc ggccaaggtg ggagcattta
300
caccgcagaa atgacaccgc acgccagcgc cccgcggccg
340

```

<210> 5738

<211> 99

<212> PRT

<213> Homo sapiens

<400> 5738

```

Met Leu Pro Pro Trp Pro Ile Ser Ser His Gln Val Arg Met Ala Leu
 1           5           10           15
Gln His Leu Pro Leu Arg Leu Gln Leu Pro Ser Gln Val His Gln Glu
      20           25           30
Thr Thr Gly His His Trp Gln Trp Arg Gly Asp Met Glu His Gly Leu
      35           40           45
Gly Ser Arg Leu Leu Ala Pro Asp Val Gln Pro Gln Thr Pro Pro Val
      50           55           60
Met Gly Glu Val Trp Arg Pro Val Gln Leu Ser Gln Gly His Ala His
65           70           75           80
Leu Ser Leu Gly Ser Val Gly Lys Ala Tyr Pro Lys Ser His Ile Gln
      85           90           95
Gly Gly Xaa

```

<210> 5739

<211> 780

<212> DNA

<213> Homo sapiens

<400> 5739

```

actttcataa ttgtaacatt gaaatcttta atctggaata tgtactggca taaagagtga
60
ggcacataca tggctttact attttccaga gggccaactg cttttactga ataatccatt
120
ttactcgta attggaacaa cctctagcct gtactaaatt tccatattta tttggcccg
180
ttcaaagtcc tctattctct gctcatctgt ccacatctaa gtgctttaac tattgtggct
240
ttataaaata ttccaatata ccataggacc ttatccttag tacttccat tttaaagttt
300
tccttgacaga caggtacttt aaataccatc tcacagcacc catcatgtcc tatcttcagg
360
aaataaaatc tctgggtatt tccaagggaa gtgaaggact gacacatga ttagaaagca
420
gagccagcac catggcccggt ccctgagcat gtccagcaaa ccctgccagg ctctgcagct
480
cctgagcacc ctgccttcgg gtctgccagt gtgtgggggc cagaagagaa aaacaaccca
540
gggggaatgc ctcttcccc cagcaggaaa gcagcttggt catcatctgt ctgaaagcag
600
gtgctgcagc agctggcaac aaagccactc tgaaaggagc tgtgtgcact gcctgtctgg
660
aaggccatgc cagagtccat cggtgcctcc accctacctg tgcaggaaac ctggacatca
720
ccacttcaag gccctacctt cctttctggg cagagcccaa ccacaataaa caggacgcgt
780

```

<210> 5740

<211> 120

<212> PRT

<213> Homo sapiens

<400> 5740

```

Met Ile Arg Lys Gln Ser Gln His His Gly Pro Ser Leu Ser Met Ser
 1           5           10           15
Ser Lys Pro Cys Gln Ala Leu Gln Leu Ser Thr Leu Pro Ser Gly
 20           25           30
Leu Pro Val Cys Gly Gly Gln Lys Arg Lys Thr Thr Gln Gly Glu Cys
 35           40           45
Leu Leu Pro Pro Ala Gly Lys Gln Leu Gly His His Leu Ser Glu Ser
 50           55           60
Arg Cys Cys Ser Ser Trp Gln Gln Ser His Ser Glu Arg Ser Cys Val
 65           70           75           80
His Cys Leu Ser Gly Arg Pro Cys Gln Ser Pro Ser Leu Pro Pro Pro
 85           90           95
Tyr Leu Cys Arg Lys Pro Gly His His His Phe Lys Ala Leu Pro Ser
100          105          110
Phe Leu Gly Arg Ala Gln Pro Gln
115          120

```

<210> 5741

<211> 2444

<212> DNA

<213> Homo sapiens

<400> 5741

```

ggcggctgct gctccgggcc tgggcacagc aagcggcgac gtcaagctcc cggggttggc
60
gcgggttggcg ggggcagtcg cgagcgtgag gaggtcggcg caggctacaa cagtgaggac
120
gagtatgagg cggctgcagc acgcatcgag gctatggacc ctgccactgt cgagcagcag
180
gagcattggt ttgaaaaggc cctacgagac aagaagggtc tcatcatcaa gcagatgaag
240
gaggatggcg cctgtctctt cggggctgta gctgaccagg tgtatggaga ccaggacatg
300
catgaggttg tgcgaaagca ttgcatggac tatctgatga agaatgccga ctacttctcc
360
aactatgtca cagaggactt taccacctac attaacagga agcggaaaaa caattgccat
420
ggcaaccaca ttgagatgca ggccatggca gagatgtaca accgtcctgt ggaggtgtac
480
cagtacagca cagaacccat caacacattc catgggatac atcaaaacga ggacgaaccc
540
attcgtgtta gctaccatcg gaatatccac tataattcag tggatgaatcc taacaaggcc
600
accattggtg tggggctggg cctgccatca ttcaaaccag ggtttgcaga gcagtctctg
660
atgaagaatg ccataaaaac atcggaggag tcatggattg aacagcagat gctagaagac
720
aagaaacggg ccacagactg ggaggccaca aatgaagcca tcgaggagca ggtggctcgg
780
gaatcctacc tgcagtgggt gcgggatcag gagaaacagg ctgccagggt ccgaggcccc
840
agccagcccc ggaaagccag cgccacatgc agttcggcca cagcagcagc ctccagtggc
900

```


ctggaggagt ggactagccg gtccccgcgg cagcggagtt cagcctcgtc acctgagcac
960
cctgagctgc atgctgaatt gggcatgaag ccccttccc caggcaactgt tttagctctt
1020
gccaaacctc cttcgccctg tgcgccaggt acaagcagtc agttctcggc aggggccgac
1080
cgggcaactt ccccccttgt gtccctctac cctgctttgg agtgccgggc cctcattcag
1140
cagatgtccc cctctgcctt tggctctgaat gactgggatg atgatgagat cctagcttcg
1200
gtgctggcag tgteccaaca ggaataccta gacagtatga agaaaaacaa agtgcacaga
1260
gacccgcccc cagacaagag ttgatggaga cccagggatt ggacaccatc tccaacccc
1320
agtactcctg ctctccggtg ccacctcacc ttctttggct tcttccctct tgcctccttc
1380
tgttctttct gctctccctt cttttccctc ctctcactt ccctctggct agccccccc
1440
tgcactctct ctcatggccg ctgccactat cacctgtctc tctgccagct gatgtgccct
1500
gttgcacccc accccatccc gcacagaacc atccctgcat tccacagggg actcggggcaa
1560
gggtgccgaa gatagacaag aggcacacag agacagacca actggcagcc aggcagcccc
1620
agaggagaga gacattcaga cagaggaaaag tctccctgcc cctcattcct tccaagatga
1680
gaaaaacttg ccgccacccc ccgacactga tgccaggag gtgggaggaa gaagtgggaa
1740
atttcccttc ccagtacccc caagaacgtc tgagccttca atgttgaatt ttttctttat
1800
taaaattact tttatcttat aaaatcaact aatcaaaaat gatatagacg acagcactgg
1860
ctctgtgaag gtggcatctt tctgggcagg caggccatgg ggcatggagg agggtgcaaa
1920
gatatggggt gctgtcttct ggcctccagc tgcattggagg ccggcccagg gtctaggggtg
1980
tgactgggc aagggcaggg cggcagggtg caggccggct tggacaatga aaccctgacc
2040
ttgtgcatt ctttttgctt ccaccaccac tagcttcttt ggaatcttgg ggtgggggtc
2100
atctttgggg attatggctg ccaccggga tttgagtgtg gggagtgtgg gagcagcctt
2160
ggcagatggg gcacccgtgc cctgcagggt ttgacaagat ccgccatctg taatgtcctt
2220
ggcacaataa aaccaaagt cagtttccct gagcgactct gttctgtgtg gggcaggggt
2280
tgggcgggccc tctgggcaga ggatgcaatg gcacggacct tggcttgacc tcagaggtgt
2340
gaatgtcttc cagcagggtc tgtctggggg cctggagttt gtatttgatt tgctgcttat
2400
taaacctcct tctggaccta ttgccactgg aaaaaaaaaa aaaa
2444

<210> 5742

<211> 427
 <212> PRT
 <213> Homo sapiens

<400> 5742

```

Gly Gly Cys Cys Ser Gly Pro Gly His Ser Lys Arg Arg Arg Gln Ala
 1           5           10           15
Pro Gly Val Gly Ala Val Gly Gly Gly Ser Pro Glu Arg Glu Glu Val
 20           25           30
Gly Ala Gly Tyr Asn Ser Glu Asp Glu Tyr Glu Ala Ala Ala Ala Arg
 35           40           45
Ile Glu Ala Met Asp Pro Ala Thr Val Glu Gln Gln Glu His Trp Phe
 50           55           60
Glu Lys Ala Leu Arg Asp Lys Lys Gly Phe Ile Ile Lys Gln Met Lys
 65           70           75           80
Glu Asp Gly Ala Cys Leu Phe Arg Ala Val Ala Asp Gln Val Tyr Gly
 85           90           95
Asp Gln Asp Met His Glu Val Val Arg Lys His Cys Met Asp Tyr Leu
 100          105          110
Met Lys Asn Ala Asp Tyr Phe Ser Asn Tyr Val Thr Glu Asp Phe Thr
 115          120          125
Thr Tyr Ile Asn Arg Lys Arg Lys Asn Asn Cys His Gly Asn His Ile
 130          135          140
Glu Met Gln Ala Met Ala Glu Met Tyr Asn Arg Pro Val Glu Val Tyr
 145          150          155          160
Gln Tyr Ser Thr Glu Pro Ile Asn Thr Phe His Gly Ile His Gln Asn
 165          170          175
Glu Asp Glu Pro Ile Arg Val Ser Tyr His Arg Asn Ile His Tyr Asn
 180          185          190
Ser Val Val Asn Pro Asn Lys Ala Thr Ile Gly Val Gly Leu Gly Leu
 195          200          205
Pro Ser Phe Lys Pro Gly Phe Ala Glu Gln Ser Leu Met Lys Asn Ala
 210          215          220
Ile Lys Thr Ser Glu Glu Ser Trp Ile Glu Gln Gln Met Leu Glu Asp
 225          230          235          240
Lys Lys Arg Ala Thr Asp Trp Glu Ala Thr Asn Glu Ala Ile Glu Glu
 245          250          255
Gln Val Ala Arg Glu Ser Tyr Leu Gln Trp Leu Arg Asp Gln Glu Lys
 260          265          270
Gln Ala Arg Gln Val Arg Gly Pro Ser Gln Pro Arg Lys Ala Ser Ala
 275          280          285
Thr Cys Ser Ser Ala Thr Ala Ala Ala Ser Ser Gly Leu Glu Glu Trp
 290          295          300
Thr Ser Arg Ser Pro Arg Gln Arg Ser Ser Ala Ser Ser Pro Glu His
 305          310          315          320
Pro Glu Leu His Ala Glu Leu Gly Met Lys Pro Pro Ser Pro Gly Thr
 325          330          335
Val Leu Ala Leu Ala Lys Pro Pro Ser Pro Cys Ala Pro Gly Thr Ser
 340          345          350
Ser Gln Phe Ser Ala Gly Ala Asp Arg Ala Thr Ser Pro Leu Val Ser
 355          360          365
Leu Tyr Pro Ala Leu Glu Cys Arg Ala Leu Ile Gln Gln Met Ser Pro
 370          375          380
Ser Ala Phe Gly Leu Asn Asp Trp Asp Asp Asp Glu Ile Leu Ala Ser

```


<212> DNA

<213> Homo sapiens

<400> 5745

```

aaagtttttt tttttttctg cttcaggcac acggggaacc acgcgtttta atcaacgtat
60
cgataaaaaa caccagggca cggacactcc aggggaaatg cttattgagt aaagtatccg
120
aggaagtgat gcagggcagg taaacagctg gtgctcagca gcgagaggac gcgtcactct
180
gccgttctgc agggtgacgc cctccccgta cctcgctgag agccacctgc agacacagca
240
ggccacagca gaatgcacag gtcactgttg taggggaaca aatcgtaatg cccagagaaa
300
acctgatagt gaaatgtaaa cagacaggac agggtggttc cagggtggcca ccaccgccag
360
gcccttcccg tgattgatct gagagcttca cagccggcgg cactgggacc catttccaga
420
aacactggaa caccaggtct ctcagatgcc cgcgggaggg gccccaggga ggcctttctc
480
agcatcagct tttgggtgac aaaccccata cagcaaaact gtacaaatac acacaacgga
540
ccccagctg acagtgagac caggacccta ggaaggtcag gtggtggtga agtcatcccc
600
tctccaaccg agcagagcct ggggttgggc tctgatgacc tcccgggcaa agtgtccagg
660
tggaggaagc aaactcccaa atggggcaca aaggtaataa aaagcagctg agagattgcg
720
ggatggggtc ggggccactt ggccgacacc ttctgcctcg cctggccggg cggggccagc
780
ctctgccac aggatggagg gtgactgtgc accctgctcc atgtacagga cgggttgagg
840
gtcccatgg
849

```

<210> 5746

<211> 140

<212> PRT

<213> Homo sapiens

<400> 5746

```

Met Thr Ser Pro Pro Pro Asp Leu Pro Arg Val Leu Val Ser Leu Ser
1      5      10      15
Ala Gly Gly Pro Leu Cys Val Phe Val Gln Phe Cys Cys Met Gly Phe
20      25      30
Val Thr Gln Lys Leu Met Leu Arg Lys Ala Ser Leu Gly Pro Leu Pro
35      40      45
Arg Ala Ser Glu Arg Pro Gly Val Pro Val Phe Leu Glu Met Gly Pro
50      55      60
Ser Ala Ala Gly Cys Glu Ala Leu Arg Ser Ile Thr Gly Arg Ala Trp
65      70      75      80
Arg Trp Trp Pro Pro Gly Thr Thr Leu Ser Cys Leu Phe Thr Phe His
85      90      95
Tyr Gln Val Phe Ser Gly His Tyr Asp Leu Phe Pro Tyr Asn Ser Asp

```

	100		105		110
Leu Cys Ile	Leu Leu Trp	Pro Ala Val	Ser Ala Gly	Gly Ser Gln	Arg
	115		120		125
Gly Thr Gly	Arg Ala Ser	Pro Cys Arg	Thr Ala Glu		
	130		135		140

<210> 5747

<211> 1999

<212> DNA

<213> Homo sapiens

<400> 5747

```

nccatggccc agtccggcgg ggaggctcgg cccggggccca agacggcggg gcagatccgc
60
gtcgccatcc aggaggccga ggacgtggac gagttggagg acgaggagga gggggcggag
120
actcggggcg ccggggaccc ggcccgtac ctcagccccg gctggggcag cgcgagcgag
180
gaggagccga gccgcgggca cagtggcacc actgcaagtg gaggtgagaa cgagcgtgag
240
gacctggagc aggagtggaa gccccgggat gaggagtga tcaagaaact ggtggatcag
300
atcgaattct acttttctga tgaaaacctg gagaaggacg cttttttgct aaaacacgtg
360
aggaggaaca agctgggata tgtgagcgtt aagctactca catccttcaa aaaggtgaaa
420
catcttacac gggactggag aaccacagca catgctttga agtattcagt ggtccttgag
480
ttgaatgagg accaccggaa ggtgaggagg accacccccg tccactgtt cccaacgag
540
aacctcccca gcaagatgct cctggtctat gatctctact tgtctcctaa gctgtgggct
600
ctggccaccc ccagaagaa tggaagggtg caagagaagg tgatggaaca cctgctcaag
660
cttttcggga cttttggagt catctcatca gtgcggatcc tcaaacctgg gagagagctg
720
ccccctgaca tccggaggat cagcagccgc tacagccaag tggggaccca ggagtgtgcc
780
atcgtggagt tcgaggaggt ggaagcagcc atcaaagccc atgagttcat gatcacagaa
840
tctcagggca aagagaacat gaaagctgtc ctgattggta tgaagccacc caaaaagaaa
900
cctgccaaag acaaaaatca tgacgaggag cccactgcga gcatccacct gaacaagtcc
960
ctgaacaaga gagtcgagga gcttcagtac atgggtgatg agtcttctgc caacagctcc
1020
tctgaccccc agagcaaccc cacatcccct atggcggggc gacggcacgc ggccaccaac
1080
aagctcagcc cgtctggcca ccagaatctc tttctgagtc caaatgcctc cccgtgcaca
1140
agtccttgga gcagccccct ggcccaacgc aaaggcgttt ccagaaagtc cccactggcg
1200
gaggaaggta gactgaactg cagcaccagc cctgagatct tccgcaagtg tatggattat
1260

```

tcctctgaca gcagcgtcac tccctctggc agccctctggg tccggaggcg tcgccaagcc
 1320
 gagatgggga cccaggagaa aagccccggt acgagtcctcc tgctctcccg gaagatgcag
 1380
 actgcagatg ggctaccctg aggggtgctg aggttgccca ggggtcctga caacaccaga
 1440
 ggatttcattg gccatgagag gagcagggcc tgtgtataaa taccttctat ttttaataca
 1500
 agctccactg aaaaccacct tcgttttcaa gggtctgaca aacacctggc atgacagaat
 1560
 ggaattcggt cccctttgag agatttttta ttcattgtaga cctcttaatt tatctatctg
 1620
 taatatacat aaatcggtac gccatgggtt gaagaccacc ttctagttca ggactcctgt
 1680
 tcttcccagc atggccacta ttttgatgat ggctgatgtg tgtgagtgtg atggccctga
 1740
 agggctgtag gacggagggt ccctggggga agtctgttct ttggtagtga atttttctct
 1800
 cttctttggt atggaatttt tcccttcagt gactgagctg tcctcgatag gccatgcaag
 1860
 ggcttctga gagttcagga aagttctctt gtgcaacagc aagtagctaa gcctatagca
 1920
 tgggtgtcttg taggaccaa tcatgtttac ctgtcaagta aataaataat aaaacaccca
 1980
 aaaaaaaaaa aaaaaaaaaa
 1999

<210> 5748

<211> 492

<212> PRT

<213> Homo sapiens

<400> 5748

Xaa	Met	Ala	Gln	Ser	Gly	Gly	Glu	Ala	Arg	Pro	Gly	Pro	Lys	Thr	Ala
1			5						10					15	
Val	Gln	Ile	Arg	Val	Ala	Ile	Gln	Glu	Ala	Glu	Asp	Val	Asp	Glu	Leu
			20					25					30		
Glu	Asp	Glu	Glu	Glu	Gly	Ala	Glu	Thr	Arg	Gly	Ala	Gly	Asp	Pro	Ala
		35					40					45			
Arg	Tyr	Leu	Ser	Pro	Gly	Trp	Gly	Ser	Ala	Ser	Glu	Glu	Glu	Pro	Ser
	50					55					60				
Arg	Gly	His	Ser	Gly	Thr	Thr	Ala	Ser	Gly	Gly	Glu	Asn	Glu	Arg	Glu
	65				70					75				80	
Asp	Leu	Glu	Gln	Glu	Trp	Lys	Pro	Pro	Asp	Glu	Glu	Leu	Ile	Lys	Lys
			85						90					95	
Leu	Val	Asp	Gln	Ile	Glu	Phe	Tyr	Phe	Ser	Asp	Glu	Asn	Leu	Glu	Lys
		100						105					110		
Asp	Ala	Phe	Leu	Leu	Lys	His	Val	Arg	Arg	Asn	Lys	Leu	Gly	Tyr	Val
	115					120						125			
Ser	Val	Lys	Leu	Leu	Thr	Ser	Phe	Lys	Lys	Val	Lys	His	Leu	Thr	Arg
	130					135					140				
Asp	Trp	Arg	Thr	Thr	Ala	His	Ala	Leu	Lys	Tyr	Ser	Val	Val	Leu	Glu
	145				150					155				160	
Leu	Asn	Glu	Asp	His	Arg	Lys	Val	Arg	Arg	Thr	Thr	Pro	Val	Pro	Leu

```

                165                170                175
Phe Pro Asn Glu Asn Leu Pro Ser Lys Met Leu Leu Val Tyr Asp Leu
                180                185                190
Tyr Leu Ser Pro Lys Leu Trp Ala Leu Ala Thr Pro Gln Lys Asn Gly
                195                200                205
Arg Val Gln Glu Lys Val Met Glu His Leu Leu Lys Leu Phe Gly Thr
                210                215                220
Phe Gly Val Ile Ser Ser Val Arg Ile Leu Lys Pro Gly Arg Glu Leu
225                230                235                240
Pro Pro Asp Ile Arg Arg Ile Ser Ser Arg Tyr Ser Gln Val Gly Thr
                245                250                255
Gln Glu Cys Ala Ile Val Glu Phe Glu Glu Val Glu Ala Ala Ile Lys
                260                265                270
Ala His Glu Phe Met Ile Thr Glu Ser Gln Gly Lys Glu Asn Met Lys
                275                280                285
Ala Val Leu Ile Gly Met Lys Pro Pro Lys Lys Lys Pro Ala Lys Asp
290                295                300
Lys Asn His Asp Glu Glu Pro Thr Ala Ser Ile His Leu Asn Lys Ser
305                310                315                320
Leu Asn Lys Arg Val Glu Glu Leu Gln Tyr Met Gly Asp Glu Ser Ser
                325                330                335
Ala Asn Ser Ser Ser Asp Pro Glu Ser Asn Pro Thr Ser Pro Met Ala
                340                345                350
Gly Arg Arg His Ala Ala Thr Asn Lys Leu Ser Pro Ser Gly His Gln
                355                360                365
Asn Leu Phe Leu Ser Pro Asn Ala Ser Pro Cys Thr Ser Pro Trp Ser
370                375                380
Ser Pro Leu Ala Gln Arg Lys Gly Val Ser Arg Lys Ser Pro Leu Ala
385                390                395                400
Glu Glu Gly Arg Leu Asn Cys Ser Thr Ser Pro Glu Ile Phe Arg Lys
                405                410                415
Cys Met Asp Tyr Ser Ser Asp Ser Ser Val Thr Pro Ser Gly Ser Pro
                420                425                430
Trp Val Arg Arg Arg Arg Gln Ala Glu Met Gly Thr Gln Glu Lys Ser
                435                440                445
Pro Gly Thr Ser Pro Leu Leu Ser Arg Lys Met Gln Thr Ala Asp Gly
                450                455                460
Leu Pro Val Gly Val Leu Arg Leu Pro Arg Gly Pro Asp Asn Thr Arg
465                470                475                480
Gly Phe His Gly His Glu Arg Ser Arg Ala Cys Val
                485                490

```

<210> 5749

<211> 2849

<212> DNA

<213> Homo sapiens

<400> 5749

```

gggtgagacg gtgggttgta tggagagaat gtgactgtac atttttataa gcaggactaa
60
cccaggaaag aggaaaaaat acatttaaca gtgaagaggc aacacagagc tccctattgt
120
gaaataaaac ccatttcaaa agttattgga aagaaagtaa ggtatggctc ttatgggtta
180

```

actagtggta gtcagtttct gctttttact ccctctgaat tattaattgt ttgccaggtt
240
cactgggtggg aggctgagcc ggtggaaaag acaccgggaa gagactcaga ggcgaccata
300
atgtcggttac gtgtacacac tctgcccacc ctgcttgag cgcgtcgtcag accggggtgc
360
agggagctgc tgtgtttgct gatgatcaca gtgactgtgg gccctgggtgc ctctgggggtg
420
tgccccaccg cttgcatctg tgccactgac atcgtcagct gcaccaacaa aaacctgtcc
480
aaggtgcctg ggaacctttt cagactgatt aagagactgg acctgagtta taacagaatt
540
gggcttctgg attctgagtg gattccagta tcgtttgcaa agctgaacac cctaattctt
600
cgtcataaca acatcaccag catttccacg ggcagttttt ccacaactcc aaatttgaag
660
tgtcttgact tatcgccaa taagctgaag acggtgaaaa atgctgtatt ccaagagttg
720
aaggttctgg aagtgttct gctttacaac aatcacatat cctatctcga tccttcagcg
780
tttggagggc tctcccagtt gcagaaactc tacttaagtg gaaattttct cacacagttt
840
ccgatggatt tgtatgttg aaggttcaag ctggcagaac tgatgttttt agatgtttct
900
tataaccgaa ttccttccat gccaatgcac cacataaatt tagtgccagg aaaacagctg
960
agaggcatct accttcatgg aaaccattt gtctgtgact gttccctgta ctccttgctg
1020
gtcttttgg atcgtaggca ctttagctca gtgatggatt ttaagaacga ttacacctgt
1080
cgctgtgggt ctgactccag gcactcgcgt caggtacttc tgctccagga tagctttatg
1140
aattgctctg acagcatcat caatggttcc tttcgtgcgc ttggctttat tcatgaggct
1200
caggtcgggg aaagactgat ggtccactgt gacagcaaga caggtaatgc aaatacggat
1260
ttcatctggg tgggtccaga taacagactg ctagagccgg ataaagagat ggaaaacttt
1320
tacgtgtttc acaatggaag tctgggtata gaaagccctc gttttgagga tgctggagtg
1380
tattcttgta tcgcaatgaa taagcaacgc ctgttaaagt aaactgtgga cgtcacaata
1440
aatgtgagca atttactgt aagcagatcc catgctcatg aggcatttaa cacagctttt
1500
accactcttg ctgcttgctg ggccagtatc gttttggtac ttttgtacct ctatctgact
1560
ccatgcccct gcaagtgtaa aaccaagaga cagaaaaata tgctacacca aagcaatgcc
1620
cattcatcga ttctcagtc tggccccgct agtgatgcct ccgctgatga acggaaggca
1680
ggtgcaggta aaagagtggg gtttttggaa cccctgaagg atactgcagc agggcagaac
1740
gggaaagtca ggctctttcc cagcgaggca gtgatagctg agggcatcct aaagtccacg
1800

agggggaaat ctgactcaga ttcagtcaat tcagtgtttt ctgacacacc ttttgtggcg
 1860
 tccacttaat ttgtgcctat atttgtatga tgcataatt taatctgttc atatttaact
 1920
 ttgtgtgtgg tctgcaaaat aaacagcagg acagaaattg tgttgttttg ttctttgaaa
 1980
 tacaacaaaa ttctcttaaa atgattggta ggaaatgagg taaagtactt cagttcctca
 2040
 atgtgccata gaaagatggg gttgttttcc aaagttaaag ttctagatca caatatctta
 2100
 gcttttagca ctattggtaa ttccagagta ggcccaaagg tgatatgact cccattgtcc
 2160
 ctttatttag gatattgaaa gaaaaaataa actttatgta ttagtgcctt ttaaaaatag
 2220
 actttgctaa cttactagta ccagagttat tttaaagaaa aacactagtg tccaatttca
 2280
 tttttaaaag atgtagaaag aagaatcaag catcaattaa ttataaagcc taaagcaaag
 2340
 ttagatttgg gggttattca gccaaaatta ccgttttaga ccagaatgaa tagactacac
 2400
 tgataaaatg tactggataa tgccacatcc tatatggtgt tatagaaata gtgcaaggaa
 2460
 agtacatttg ttgacctgct ttttcatttt gtacattctt cccattctgt attcttgtac
 2520
 aaaagatctc attgaaaatt taaagtcac ataatttggt gccataaata tgtaagtgtc
 2580
 aatacaaaaa tgtctgagta acttcttaaa tccctgttct agcaaactaa tattggttca
 2640
 tgtgcttggt tatatgtaaa tcttaaatta tgtgaactat taaatagacc ctactgtact
 2700
 gtgctttgga catttgaatt aatgtaaata tatgtaatct gtgacttgat attttgtttt
 2760
 atttggctat ttaaaaacat aaatctaaaa tgtcttatgt taccagatta tgctattttg
 2820
 tataaagcac cactgatagc aaaaaaaaaa
 2849

<210> 5750

<211> 522

<212> PRT

<213> Homo sapiens

<400> 5750

Met	Ser	Leu	Arg	Val	His	Thr	Leu	Pro	Thr	Leu	Leu	Gly	Ala	Val	Val
1				5					10					15	
Arg	Pro	Gly	Cys	Arg	Glu	Leu	Leu	Cys	Leu	Leu	Met	Ile	Thr	Val	Thr
		20						25					30		
Val	Gly	Pro	Gly	Ala	Ser	Gly	Val	Cys	Pro	Thr	Ala	Cys	Ile	Cys	Ala
		35					40					45			
Thr	Asp	Ile	Val	Ser	Cys	Thr	Asn	Lys	Asn	Leu	Ser	Lys	Val	Pro	Gly
	50					55				60					
Asn	Leu	Phe	Arg	Leu	Ile	Lys	Arg	Leu	Asp	Leu	Ser	Tyr	Asn	Arg	Ile
65				70					75					80	
Gly	Leu	Leu	Asp	Ser	Glu	Trp	Ile	Pro	Val	Ser	Phe	Ala	Lys	Leu	Asn

													85														90														95
Thr	Leu	Ile	Leu	Arg	His	Asn	Asn	Ile	Thr	Ser	Ile	Ser	Thr	Gly	Ser																										
													100														105														110
Phe	Ser	Thr	Thr	Pro	Asn	Leu	Lys	Cys	Leu	Asp	Leu	Ser	Ser	Asn	Lys																										
													115														120														125
Leu	Lys	Thr	Val	Lys	Asn	Ala	Val	Phe	Gln	Glu	Leu	Lys	Val	Leu	Glu																										
													130														135														140
Val	Leu	Leu	Leu	Tyr	Asn	Asn	His	Ile	Ser	Tyr	Leu	Asp	Pro	Ser	Ala																										
													145														150														155
Phe	Gly	Gly	Leu	Ser	Gln	Leu	Gln	Lys	Leu	Tyr	Leu	Ser	Gly	Asn	Phe																										
													165														170														175
Leu	Thr	Gln	Phe	Pro	Met	Asp	Leu	Tyr	Val	Gly	Arg	Phe	Lys	Leu	Ala																										
													180														185														190
Glu	Leu	Met	Phe	Leu	Asp	Val	Ser	Tyr	Asn	Arg	Ile	Pro	Ser	Met	Pro																										
													195														200														205
Met	His	His	Ile	Asn	Leu	Val	Pro	Gly	Lys	Gln	Leu	Arg	Gly	Ile	Tyr																										
													210														215														220
Leu	His	Gly	Asn	Pro	Phe	Val	Cys	Asp	Cys	Ser	Leu	Tyr	Ser	Leu	Leu																										
													225														230														235
Val	Phe	Trp	Tyr	Arg	Arg	His	Phe	Ser	Ser	Val	Met	Asp	Phe	Lys	Asn																										
													245														250														255
Asp	Tyr	Thr	Cys	Arg	Leu	Trp	Ser	Asp	Ser	Arg	His	Ser	Arg	Gln	Val																										
													260														265														270
Leu	Leu	Leu	Gln	Asp	Ser	Phe	Met	Asn	Cys	Ser	Asp	Ser	Ile	Ile	Asn																										
													275														280														285
Gly	Ser	Phe	Arg	Ala	Leu	Gly	Phe	Ile	His	Glu	Ala	Gln	Val	Gly	Glu																										
													290														295														300
Arg	Leu	Met	Val	His	Cys	Asp	Ser	Lys	Thr	Gly	Asn	Ala	Asn	Thr	Asp																										
													305														310														315
Phe	Ile	Trp	Val	Gly	Pro	Asp	Asn	Arg	Leu	Glu	Pro	Asp	Lys	Glu																											
													325														330														335
Met	Glu	Asn	Phe	Tyr	Val	Phe	His	Asn	Gly	Ser	Leu	Val	Ile	Glu	Ser																										
													340														345														350
Pro	Arg	Phe	Glu	Asp	Ala	Gly	Val	Tyr	Ser	Cys	Ile	Ala	Met	Asn	Lys																										
													355														360														365
Gln	Arg	Leu	Leu	Asn	Glu	Thr	Val	Asp	Val	Thr	Ile	Asn	Val	Ser	Asn																										
													370														375														380
Phe	Thr	Val	Ser	Arg	Ser	His	Ala	His	Glu	Ala	Phe	Asn	Thr	Ala	Phe																										
													385														390														395
Thr	Thr	Leu	Ala	Ala	Cys	Val	Ala	Ser	Ile	Val	Leu	Val	Leu	Leu	Tyr																										
													405														410														415
Leu	Tyr	Leu	Thr	Pro	Cys	Pro	Cys	Lys	Cys	Lys	Thr	Lys	Arg	Gln	Lys																										
													420														425														430
Asn	Met	Leu	His	Gln	Ser	Asn	Ala	His	Ser	Ser	Ile	Leu	Ser	Pro	Gly																										
													435														440														445
Pro	Ala	Ser	Asp	Ala	Ser	Ala	Asp	Glu	Arg	Lys	Ala	Gly	Ala	Gly																											

515

520

<210> 5751
 <211> 926
 <212> DNA
 <213> Homo sapiens

<400> 5751
 ngcgggcatg gccaggcggg gtggcctcgg gccggggcag aggcctggct ccgctgcctg
 60
 acctggaaca gtctctgcct ctctccaage ctcggtttcc ccagctggac ggtgatgggg
 120
 gtgagggcta gctgagggct ctctgccct tcgtgcattc gctggtcact aatcggggcac
 180
 cttgtgggtg ctgtgctccg catgggggac ccagtgggta cagagacgcc caccctcctg
 240
 gggctcccag agcagaggcg cgcagcagtt agacacgtga acaagggcgc aggcattcctg
 300
 gagatccgct ctgtacacgt gggcgctcgtg gtcatcaaag cagtgtcctc aggtttctac
 360
 gtggccatga aacgccgggg ccgcctctac gggtcgacac tctacaccgt ggactgcagg
 420
 ttccgggagc gcatcgaaga gaacggccac aacacctacg cctcacagcg ctggcgccgc
 480
 cgcgccagc ccatgttcct ggcgctggac aggagggggg ggccccggcc aggcggccgg
 540
 acgcggcggg accacctgtc cgcccacttc ctgcccgtcc tgggtctcctg aggccttgag
 600
 aggcggcgcg ctccccaagg tgcctgggct ggtggcgagg ggccccggca cgcttggtct
 660
 tccccctcgc ggctctgtaa gcgctgagtg cccaccgtgt gcgggcgctg tggacacagc
 720
 ccaggagccc tccagggggg tcccagcctg aggggggtgt ggccaccaag caggttcaat
 780
 cctgagttgg ggacctcgag gacccaacag ggcgcctctc gggctgaagg acgcagacgt
 840
 cgaaaggtcg agggggacgt cccaggcagg gcccggcaga ggcaggggct cggggggggg
 900
 agcacgttgg gagtgggggc agggagc
 926

<210> 5752
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 5752
 Met Gly Asp Pro Val Val Thr Glu Thr Pro Thr Leu Leu Gly Leu Pro
 1 5 10 15
 Glu Gln Arg Arg Ala Ala Val Arg His Val Asn Lys Gly Ala Gly Ile
 20 25 30
 Leu Glu Ile Arg Ser Val His Val Gly Val Val Val Ile Lys Ala Val
 35 40 45
 Ser Ser Gly Phe Tyr Val Ala Met Asn Arg Arg Gly Arg Leu Tyr Gly

50					55					60					
Ser	Arg	Leu	Tyr	Thr	Val	Asp	Cys	Arg	Phe	Arg	Glu	Arg	Ile	Glu	Glu
65					70					75					80
Asn	Gly	His	Asn	Thr	Tyr	Ala	Ser	Gln	Arg	Trp	Arg	Arg	Arg	Gly	Gln
			85					90						95	
Pro	Met	Phe	Leu	Ala	Leu	Asp	Arg	Arg	Gly	Gly	Pro	Arg	Pro	Gly	Gly
			100					105					110		
Arg	Thr	Arg	Arg	Tyr	His	Leu	Ser	Ala	His	Phe	Leu	Pro	Val	Leu	Val
		115					120					125			
Ser															

<210> 5753

<211> 5668

<212> DNA

<213> Homo sapiens

<400> 5753

```

nnaccggtac tttgtcttgg ataacagtgt catcctggca atgctggaac aacctcttgg
60
aaatgagcag aatgattttt tcccctctgt cactgtgctg gtccggggaa tgtctggaag
120
acttgcttgg gcacaacagc tttgtctttt acccagagga gcaaaagcaa atcagaagct
180
ttttgtacct gaacctcgcc cagttcctaa aatgacgttg gatttaaata ttctgtgaaa
240
catcgggccat ttcctgaaga ggtggacaag attccttttg tgaaagcaga tctcagcatt
300
ccagatttgc atgaaatagt cactgaagaa ttagaagaga gacacgaaaa attaaggagt
360
ggcatggccc agcagattgc ttatgaaata caccttgagc aacagagtga ggaggaattg
420
cagaagagaa gttttcctga ccagttacg gattgcaagc ccccgctcc tgcccaggaa
480
ttccaaacag cccgcctttt tctctcacac ttggattttt tgccttaga agcactgaag
540
gaacctgcaa atagtcgtct acctcctcac cttattgcac ttgattccac gataacctga
600
ttttttgatg acattgggta tctggatctc ttgccatgtc gtccttttga cacagttttt
660
attttctata tgaagccagg tcagaaaacg aaccaagaga ttttaaagaa tgtggagtct
720
tccagaactg ttcagccaca tttcctagaa tttttgcttt cccttggtg gtcagtagat
780
gtgggcagac accctggttg gactgggcat gtttctacca gttggtctat taattgttgt
840
gatgatggtg aaggatctca acaagaagaa gtgatttcct ctgaagatat tggagctagc
900
attttcaatg gacagaagaa ggtgctgtat tatgctgatg cccttacaga aattgctttt
960
gtggttcctt ctctgtgga gtccttaact gattcattgg aaagtaacat ctcggaccaa
1020
gatagtgatt caaatatgga tcttatgcca ggaattctga aacagccatc cctgacactt
1080

```

gagctttttcc ccaatcatac agacaatctt aattcctcac agaggctcag tcccagttcc
1140
agaatgagga agctgcctca gggtcgccct gttcctcccc ttggacctga gacaagagtt
1200
tctgtagtct ggggtggaacg ctatgatgat atagaaaact tccccctctc agagctgatg
1260
acagagatca gtactgggtgt ggaaactact gcaaatagta gcacttcact gagatctaca
1320
actcttgaaa aagaagttcc tgtcatcttc atccaccctt taaacactgg attattccgg
1380
ataaaaaattc aaggagccac tggaaaaattt aatatggtca tccctcttgt ggatgggatg
1440
attgtcagca ggcgagctct tggctttctg gtgaggcaga ctgtaattaa catttgtaga
1500
agaaagagac tggaaagtga ctctacagct ccccccatg tccgccggaa acagaaaatc
1560
accgacattg tcaacaagta ccggaacaag cagctggagc cagagtttta tacttcactt
1620
ttccaggagg ttggactcaa gaactgcagt tcttagacca ctgaatttct aagactggtg
1680
aactccagtt tgggaactat aacacagcag aacagtttga taggtgatca ctgtaaaaaat
1740
aaaaacaaat cactcccaag agcttactgt ttaatcacca gaatagaaga aacacattat
1800
aaccatttg atagaagact ttgggtatc tagtgaaatg ggctcccaga cacaatcata
1860
ctctgtctga taatgatgat atacatttta gccataaact ttcttttaa agtgacaatt
1920
ttagttaaac ataagccttt tgaggagaaa ggcttttatg catctcagtt aaacacgtgc
1980
attggtagta tcaacaaatt tgcaatatag aagttgaaga tagtttttta cctcactttt
2040
taggaggttg tattcaaaat taaaatctca gaatcttaca ggacatttaa agactcatgt
2100
tgatagcatg gaggagaagg aaagaagtca cagccttcta ctcagttgta ggtcttcttg
2160
tcattccagct gtcacactga caaaaagaaa agatgataca tgttttttgc tcagataaga
2220
agcctgacat taaaagatgt catatttttt tctccacatt tcaaaaagtt gtccttctca
2280
tcactgcaca gatctgtctg aaagcctcag tttctgagtg acccaggaac agatcagaaa
2340
tggagcatgg ccttgtcctt taatggggat gcaaataaag tttgtggggg taaaagttat
2400
aagacagcag tgatacccca ctctctccat tattgtccag cggggtgaca taatgacagg
2460
ttaaatattt gtgattcatt gattaaatat tatttaaaga aatgtaaatt cacaataagg
2520
gttgaaaatt atttggtttc atccattgtc tcttatttca ggaccaagca gcaaactgca
2580
gtagtttgtg aaggattcta atatgggggt caggaatagc ctctcaacgc tactaattca
2640
gatctctccc agagaactac tggatttcct cataattgac aaacatgagt gaccacctct
2700

ttgggtggct actgtagaa atggctgttg tcatgttttc tggactttgc cagccaacag
2760
atccctgccg gggttttgaa atacttctat tacctcgtcg ctacttttct gcagggataa
2820
aacttttgag gtggccagac ccagaacatc caaggattcc tgttacagtg ctacagtata
2880
cactgctcat ttatcctatt ctcatgtgct ttcttcttta gtaagattat tttaagaaaa
2940
taagtatat ttaaagtcca aagaggaatg atcacagttg tataaggggt gttttccac
3000
ttgaactctg atgtcagtcg actgtgggtc agagctacaa ccatctgttt gggttgatgt
3060
tttggtggtt tacttacgga gtggggatag tgtgagacct aattccctgt gcaaatgtct
3120
cttattccag aaatgtgcat ttgtcatct ataagcaaga aatatgggca tagcagctct
3180
tggtttaaag ttggcataa cctgttcagt ttgttttaa gctcaggtaa agataacctc
3240
ctctttctat gactccagtt tccattcagg ttatagtatt attcaatagt tgattttctt
3300
tttaagctgg gcaataaatt gatgtttcca gatggtaaca tgggagaggg catataggat
3360
aaagatgagc aaattctacc ctaaaaatgt tctagtagtt cacaggaaga agatgaggtt
3420
taataacttt caaggtaatt ctagattgac attttgaggg gaaaatgggc tcttggtcta
3480
gttgaagtga gcagagaagg ctataaatta atatgtaact tacagcattc cagagggttaa
3540
aaataactga tgcagatgta cttcttcagt gtgattcttc agatcaaact tttacttttg
3600
gcatagttaa ttccagaaaa atgtgctgta tgtgtgtgtg tatgaggggt ggtcttgctg
3660
atccttcagt tagctctaaa ttctggcaac tccttgtaat tccaatgtat ttgatacatg
3720
aacaatcatg ttgaatgcat ttgtgatctg ggagacttcc tcgtcttcca gggaagggaag
3780
gatgtgcagc ccctgaaggc atgaaactcc cagtgtgtac ggagccagtg gaatatggga
3840
taccataacc ttaccaggcg ctggttcctt ctgctcacia taacatctgc ccaaagaggg
3900
agtgggaaga acgcttagct ctttctactg tatggatttg agttcatggt cactattttt
3960
accacctgc ctttggttaa aatcactttg agtagaatag cactggagga acatatttag
4020
cacctaatat taatatttag tagtccattg ataaatttgc cagcatatgt tctagcctct
4080
ggggggaaac caggaccact ttgtctgtg gcttaaacag ttcagttgct atatctgtg
4140
ggtatgccgg ggggtgatga gtgtggcatt ccgtgaagag gaagggtgta agtaagggtt
4200
cccttctact gccttcttaa gttgcaggag ggagcttttc tctcccctc tgggtgggag
4260
cactgaggac agtgaggagg gcttttacct tgtaatcct ttccttattt agctagcttt
4320

cctttttgtc tagggcttcc tcttgagacc ctcttccatc cattgggcct ttgaaaggac
4380
taatcagaca cacacacaca cacacacaca cacacacaca cacactcgca tactcatgca
4440
cattttcctt catttccaga tcctttatct cagagcagcc cattttcctc tggattcatt
4500
gatgaataca agtaccacaca cctttggcca gtaatgtcag ttacctgctg caggttctgt
4560
gtatgaggcc ttcatagaac gttaccttct ccatacacta gggaagcatt tgtcagactc
4620
tgcagactgg gttctagaga ggcagagtct ttaagagtat tcatttcttc tggaagggtg
4680
agctttaccc aaagtgggaag ttagccttgc tcaaagatgt gttttgtggg aggtggtaaa
4740
aataaataaa taaataaata ataaaaaaag aaacatgtat tggaggtaat ttgacactgc
4800
tgctggcagt agttctctat tcaccatttt aaagcccatt caggttctct cttcctgaaa
4860
agaactgatt gctgtgttta catgaaatga cattggagtc agatgggtctg ttttaaagat
4920
ttccatgaca gcctcttttc ctgagttgga gagattggag gtggtctatc cgtacgatgt
4980
ggaatcaaac ggtgggtttc ttagtagcta aagaagccat gtacttctag tgtgtttctc
5040
agaatatcaa ctcatgttct tcagatgctt ttcttttttt aatgggtgagg gaaaaggat
5100
aatttgggat tccacagtgc cttgcatata gtaggcgccc agtaaatact tgttgaagca
5160
aaccaagttt cccaagtcct catctcttat agtgaccaag acatctttct cctctgaagg
5220
gcttggcagt tgtggctaaa aaataagcag tatcattatt tgcttgaaat catatataca
5280
gtttgtatga atttcagtat gttgccaaga catgattttt tcttattgta ttttctgtaa
5340
atatttctgg cactgaactg taaagtaaag gcaaagtgt aatatgaagg cgtgcccgtg
5400
ccccttgctt cctgtgtttc atcttcgtcg gttaggggaag aaggtccaga ggtttgtttg
5460
tatttatgcc gatcctttgt ccagaagaag cccatggaat attgaatgta atacatttag
5520
tcaattaaat ttttaaggaga ttcttatcta ataactttgt gtgtgctttt ggatacagga
5580
tgaggcttta ctctacact ggtgctgtta attttaccct ttcaggggat gtctgctcgg
5640
ctttggctgc cctttataat ttagatct
5668

<210> 5754

<211> 221

<212> PRT

<213> Homo sapiens

<400> 5754

Asp Ser Leu Glu Ser Asn Ile Ser Asp Gln Asp Ser Asp Ser Asn Met

```

      1           5           10           15
Asp Leu Met Pro Gly Ile Leu Lys Gln Pro Ser Leu Thr Leu Glu Leu
      20           25           30
Phe Pro Asn His Thr Asp Asn Leu Asn Ser Ser Gln Arg Leu Ser Pro
      35           40           45
Ser Ser Arg Met Arg Lys Leu Pro Gln Gly Arg Pro Val Pro Pro Leu
      50           55           60
Gly Pro Glu Thr Arg Val Ser Val Val Trp Val Glu Arg Tyr Asp Asp
      65           70           75           80
Ile Glu Asn Phe Pro Leu Ser Glu Leu Met Thr Glu Ile Ser Thr Gly
      85           90           95
Val Glu Thr Thr Ala Asn Ser Ser Thr Ser Leu Arg Ser Thr Thr Leu
      100          105          110
Glu Lys Glu Val Pro Val Ile Phe Ile His Pro Leu Asn Thr Gly Leu
      115          120          125
Phe Arg Ile Lys Ile Gln Gly Ala Thr Gly Lys Phe Asn Met Val Ile
      130          135          140
Pro Leu Val Asp Gly Met Ile Val Ser Arg Arg Ala Leu Gly Phe Leu
      145          150          155          160
Val Arg Gln Thr Val Ile Asn Ile Cys Arg Arg Lys Arg Leu Glu Ser
      165          170          175
Asp Ser Tyr Ser Pro Pro His Val Arg Arg Lys Gln Lys Ile Thr Asp
      180          185          190
Ile Val Asn Lys Tyr Arg Asn Lys Gln Leu Glu Pro Glu Phe Tyr Thr
      195          200          205
Ser Leu Phe Gln Glu Val Gly Leu Lys Asn Cys Ser Ser
      210          215          220

```

<210> 5755

<211> 1513

<212> DNA

<213> Homo sapiens

<400> 5755

```

nnacgcgtga aggggaacct gtactgcgag gtgtgccccg aggaccggcc cctcatcgtg
60
cagttctgtg ccaatgaccc ggaggtgttt gttcaggcgg ctctcctggc tcaggattac
120
tgtgacgcca ttgacctgaa cttgggctgc ccacagatga tagccaagag aggtcactat
180
ggcgcccttc tgcaggacga gtgggacctg ctccaaagaa tgattttgct ggcccacgag
240
aaactctctg ttcctgtcac gtgcaaaatc cgtgtcttcc cggagattga caagaccgtg
300
aggtacgccc agatgctgga gaaggccggc tgccagttgc tgacggtgca cggacgcacc
360
aaggagcaga agggggccct gtcgggtgca gcgtcctggg agcatatcaa ggctgtgcgg
420
aaggctgtgg ccatccctgt gtttgctaac gggaacatcc agtgctgca ggacgtggag
480
cgctgcctcc gggacacggg tgtgcagggc gtcattgagc cagagggcaa cctgcacaac
540
cccgccctgt tcgagggccg gagccctgcc gtgtgggagc tggccgagga gtatctggac
600

```


atcgtgcggg agcacccttg cccctgtcc tacgtccggg cccacctctt caagctgtgg
 660
 caccacacgc tgcagggtgca ccaggagctg cgagaggagc tggccaaggt gaagaccctg
 720
 gagggcatcg ctgctgtgag ccaggagctg aagctgcggg gtcaggagga gatatccagg
 780
 caggagggag cgaagccac cggcgacttg ccctccact ggatctgcca gccctacatc
 840
 cgcccggggc ccaggaggag gagcaaggag aaggcagggt cgcgcagcaa gcgggacctg
 900
 gaggaagagg aggggtggcac ggaggtcctg tccaagaaca agcaaaagaa gcagctgagg
 960
 aacccccaca agaccttcga cccctctctg aagccaaaat atgcaaagtg tgaccagtgt
 1020
 ggaaacccaa agggcaacag atgtgtgttc agcctgtgcc gcggctgctg caagaagcga
 1080
 gcctccaaag agactgcaga ctgccagggt cacggattgc tttttaaacc caaattggag
 1140
 aagtctctgg cctggaaaga ggcccagcct gagctgcagg agcctcagcc agcagcacct
 1200
 ggaacaccag gtggcttctc cgaagtcatg ggagtgccc tggcctgaag gccacaacc
 1260
 cccacccccca ggactgctgc tggagcctgg acacgtccta cttaaagaaa tgccttttac
 1320
 tcagggaatc tcctgctact taatgtggaa agacacgccc atgtccccct tcggccact
 1380
 ctgggggcct ggaaatgctg cagtggggag caggccccag gctggacctg ccctgtcctc
 1440
 agcacgcgtg tgcaaaagtg aacaataaat catttcaaag atgaaaaaaaa aaaaaaaaaa
 1500
 aaaaagtcca cgc
 1513

<210> 5756

<211> 415

<212> PRT

<213> Homo sapiens

<400> 5756

Xaa	Arg	Val	Lys	Gly	Asn	Leu	Tyr	Cys	Glu	Val	Cys	Pro	Glu	Asp	Arg
1				5					10					15	
Pro	Leu	Ile	Val	Gln	Phe	Cys	Ala	Asn	Asp	Pro	Glu	Val	Phe	Val	Gln
			20					25					30		
Ala	Ala	Leu	Leu	Ala	Gln	Asp	Tyr	Cys	Asp	Ala	Ile	Asp	Leu	Asn	Leu
			35				40					45			
Gly	Cys	Pro	Gln	Met	Ile	Ala	Lys	Arg	Gly	His	Tyr	Gly	Ala	Phe	Leu
	50					55					60				
Gln	Asp	Glu	Trp	Asp	Leu	Leu	Gln	Arg	Met	Ile	Leu	Leu	Ala	His	Glu
65					70					75				80	
Lys	Leu	Ser	Val	Pro	Val	Thr	Cys	Lys	Ile	Arg	Val	Phe	Pro	Glu	Ile
			85					90						95	
Asp	Lys	Thr	Val	Arg	Tyr	Ala	Gln	Met	Leu	Glu	Lys	Ala	Gly	Cys	Gln
			100					105					110		
Leu	Leu	Thr	Val	His	Gly	Arg	Thr	Lys	Glu	Gln	Lys	Gly	Pro	Leu	Ser

```

      115      120      125
Gly Ala Ala Ser Trp Glu His Ile Lys Ala Val Arg Lys Ala Val Ala
      130      135      140
Ile Pro Val Phe Ala Asn Gly Asn Ile Gln Cys Leu Gln Asp Val Glu
145      150      155      160
Arg Cys Leu Arg Asp Thr Gly Val Gln Gly Val Met Ser Ala Glu Gly
      165      170      175
Asn Leu His Asn Pro Ala Leu Phe Glu Gly Arg Ser Pro Ala Val Trp
      180      185      190
Glu Leu Ala Glu Glu Tyr Leu Asp Ile Val Arg Glu His Pro Cys Pro
      195      200      205
Leu Ser Tyr Val Arg Ala His Leu Phe Lys Leu Trp His His Thr Leu
      210      215      220
Gln Val His Gln Glu Leu Arg Glu Glu Leu Ala Lys Val Lys Thr Leu
225      230      235      240
Glu Gly Ile Ala Ala Val Ser Gln Glu Leu Lys Leu Arg Cys Gln Glu
      245      250      255
Glu Ile Ser Arg Gln Glu Gly Ala Lys Pro Thr Gly Asp Leu Pro Phe
      260      265      270
His Trp Ile Cys Gln Pro Tyr Ile Arg Pro Gly Pro Arg Glu Gly Ser
      275      280      285
Lys Glu Lys Ala Gly Ala Arg Ser Lys Arg Ala Leu Glu Glu Glu Glu
      290      295      300
Gly Gly Thr Glu Val Leu Ser Lys Asn Lys Gln Lys Lys Gln Leu Arg
305      310      315      320
Asn Pro His Lys Thr Phe Asp Pro Ser Leu Lys Pro Lys Tyr Ala Lys
      325      330      335
Cys Asp Gln Cys Gly Asn Pro Lys Gly Asn Arg Cys Val Phe Ser Leu
      340      345      350
Cys Arg Gly Cys Cys Lys Lys Arg Ala Ser Lys Glu Thr Ala Asp Cys
      355      360      365
Pro Gly His Gly Leu Leu Phe Lys Thr Lys Leu Glu Lys Ser Leu Ala
      370      375      380
Trp Lys Glu Ala Gln Pro Glu Leu Gln Glu Pro Gln Pro Ala Ala Pro
385      390      395      400
Gly Thr Pro Gly Gly Phe Ser Glu Val Met Gly Ser Ala Leu Ala
      405      410      415

```

<210> 5757

<211> 2362

<212> DNA

<213> Homo sapiens

<400> 5757

```

cagatcacca gcgtttgtag acagtagtgt ggcgcttgga gtttacctga gggccagtgg
60
agctccaggg acctatcagg acggggacct gtggggactg ggaaggcctg tggggctgcg
120
tggagcccgg tactggaggg cgacgggggt gacggggacg ctgaggacac agagcggagg
180
ggcatgatgg ctgctggggc tggaggtgtc gagagtgact gtgctggggc tgctccatcg
240
ttgtctgagc ctcccgggtg tgccgctgtg gccgtttctt tgatgaggct ctcagaggcc
300

```

gagtcattca ctgccagcct gaagctgccc atgcgcatat tcgggctgga gcctctgagg
360
ccacacaaac gccggctggg gaggcgaagt gtggggctga gcaccagaac tccaggagcg
420
tctgggctgg agacagaact ggggtgggcag gtggggaggg cctgcagatc tgagtgggca
480
gccgaggagg aacccagaag acgccagcga tggagctctg ccggggcgga atgtggccag
540
gagggggcggg agcagtgacg gcctgtccgg cgctagaact agggaccgtg ctctcaggac
600
ctctggatgt tcccaggtat cctgatgttc caccagaag ccgccagggc catcctggag
660
taccgcatcc gcacgctgga cggggccctg gagaacgccc agaacctggg ctaccagggg
720
gccaaagtttg cctgggagag tgcagactcc ggccatagagg tttgccctga ggacatttac
780
ggagtccagg aggtccacgt caacggggcc gtggtgttgg ccttcgagct gtactacat
840
accacccagg acctgcagct atttcgagag ggtggtgggt gggaggtggt tagggctgtg
900
gcgaagtttt ggtgcagtcg tgttgagtgg agccccaggg aggaaaagta ccacctgagg
960
ggagtcattg cccccgacga gtaccattca ggggtcaaca actctgtgta caccaacgtc
1020
ctggtccaga acagcctgcg ctttgctgct gccctggccc aggacctggg tcttccatc
1080
cccagccagt ggctggcggg ggctgacaag atcaaggtag cctttgacgt ggagcagaac
1140
ttccacccgg agttcgatgg gtatgagcct ggagaggtgg tgaagcaggc agacgtcgtg
1200
ctcctgggat acccagtcct cttctccctg agtctgatg ttcgcaggaa aaatctggag
1260
atttacgagg ctgtgacgtc cccccagggc ccgccatga cctggagcat gtttgctgtg
1320
ggctggatgg agctgaagga cgcagtgcgg gcccggggcc tcctggacag gagctttgcc
1380
aacatggctg aacccttcaa ggtgtggacg gagaatgcag acgggtcagg cgctgtgaac
1440
ttcctgacag gcatgggggg cttcctgcag gcggtggtct tcgggtgcac ggggttcagg
1500
gtcaccgag cggtgtgac ctttgacct gtgtgtctgt cggggatctc cagagtgagc
1560
gtctccggca tcttctacca ggggaacaag ctcaacttct ctttttccga ggactccgtg
1620
accgtggagg tcacagctcg agcagggccc tgggtcctc acctggaggc tgagctgtgg
1680
ccatcccagt cccggtctc cctgttgcca ggacacaagg tctcctttcc ccgctcggct
1740
ggccggatac aaatgtcacc cccgaagctg cctggaagtt ccagctccga gttccctggg
1800
aggacttttt cagatgttag ggaccgctc cagagcccc tctgggtcac cctgggttcc
1860
tccagcccca ccgagtact cactgtggac cctgcctctg aataatcagg aacggtggct
1920

tcagagacgt ctcttgggcc ttccctcttg ccacgtctgc acccaccct cctgggcacc
 1980
 ctccatgcct gccatccctc acctgcagcc aggcctctcag ggaaggcca tgctgcttgg
 2040
 cctgagttca aggccttctg cctgtagcct ggactcccgt ggacccccgt gggcaggtgg
 2100
 cttccccgtg gcatctccac accgcctctg cctgccctg tggactgatg ctatcgcgca
 2160
 cgggtcccacg accccacccc gagctcctga agccggggtc tgagcctgca tcacctctgg
 2220
 cctctcatcc cccactctcc tgagagcagt ggtcacagcg gccggccgct ctgctgagaa
 2280
 ggcagagagg caggctcagg cctcagcgtg gacagcaggg ataaggggca cgaaggacgg
 2340
 ggactcggcc ccttcagaat tc
 2362

<210> 5758

<211> 440

<212> PRT

<213> Homo sapiens

<400> 5758

Gly	Pro	Cys	Ser	Gln	Asp	Leu	Trp	Met	Phe	Pro	Ser	Ile	Leu	Met	Phe
1				5					10				15		
His	Pro	Glu	Ala	Ala	Arg	Ala	Ile	Leu	Glu	Tyr	Arg	Ile	Arg	Thr	Leu
			20					25				30			
Asp	Gly	Ala	Leu	Glu	Asn	Ala	Gln	Asn	Leu	Gly	Tyr	Gln	Gly	Ala	Lys
		35				40					45				
Phe	Ala	Trp	Glu	Ser	Ala	Asp	Ser	Gly	Leu	Glu	Val	Cys	Pro	Glu	Asp
		50				55					60				
Ile	Tyr	Gly	Val	Gln	Glu	Val	His	Val	Asn	Gly	Ala	Val	Val	Leu	Ala
65					70					75				80	
Phe	Glu	Leu	Tyr	Tyr	His	Thr	Thr	Gln	Asp	Leu	Gln	Leu	Phe	Arg	Glu
			85					90						95	
Gly	Gly	Gly	Trp	Glu	Val	Val	Arg	Ala	Val	Ala	Lys	Phe	Trp	Cys	Ser
			100					105					110		
Arg	Val	Glu	Trp	Ser	Pro	Arg	Glu	Glu	Lys	Tyr	His	Leu	Arg	Gly	Val
		115					120					125			
Met	Ser	Pro	Asp	Glu	Tyr	His	Ser	Gly	Val	Asn	Asn	Ser	Val	Tyr	Thr
		130				135					140				
Asn	Val	Leu	Val	Gln	Asn	Ser	Leu	Arg	Phe	Ala	Ala	Ala	Leu	Ala	Gln
145					150				155					160	
Asp	Leu	Gly	Leu	Pro	Ile	Pro	Ser	Gln	Trp	Leu	Ala	Val	Ala	Asp	Lys
			165					170						175	
Ile	Lys	Val	Pro	Phe	Asp	Val	Glu	Gln	Asn	Phe	His	Pro	Glu	Phe	Asp
		180						185					190		
Gly	Tyr	Glu	Pro	Gly	Glu	Val	Val	Lys	Gln	Ala	Asp	Val	Val	Leu	Leu
		195				200						205			
Gly	Tyr	Pro	Val	Pro	Phe	Ser	Leu	Ser	Pro	Asp	Val	Arg	Arg	Lys	Asn
		210				215					220				
Leu	Glu	Ile	Tyr	Glu	Ala	Val	Thr	Ser	Pro	Gln	Gly	Pro	Ala	Met	Thr
225					230					235				240	
Trp	Ser	Met	Phe	Ala	Val	Gly	Trp	Met	Glu	Leu	Lys	Asp	Ala	Val	Arg

```
<210> 5759
<211> 1333
<212> DNA
<213> Homo sapiens
```

```

<400> 5759
cgcacggggcg cgcgcagtggt tgacgcgctt cttagctgggt ggcgcgcgga gcccaaattc
60
caagtggaaa ctgcaggcgc acgagggagg aacgcgtgga gcatgaaaag gcagggggcc
120
tcctctgagc gaaaacgagc gcggataccg tccgggaagg ccggagcagc aaatggattt
180
ctcatggaag tttgtgttga ttcagtggaa tcagctgtga atgcagaaag aggaggtgct
240
gatcggattg aattatgttc tggtttatca gaggggggaa ctacaccag catgggtgtc
300
cttcaagtag tgaagcagag tgttcagatc ccagtttttg tgatgattcg gccacgggga
360
ggtgattttt tgtattcaga tcgtgaaatt gaggtgatga aggctgacat tcgtcttgcc
420
aagctttatg gtgctgatgg tttggttttt ggggcattga ctgaagatgg acacattgac
480
aaagagctgt gtatgtccct tatggctatt tgccgcctc tgccagtcac tttccaccga
540
gccttttgaca tggttcatga tccaatggca gctctggaga ccctcttaac cttgggattt
600
gaacgcgtgt tgaccagtgg atgtgacagt tcagcattag aagggtacc cctaataaag
660

```

cgactcattg agcaggcaaa aggcaggatt gtggaatgc caggagggtg tataacagac
 720
 agaaatctac aaaggatcct tgagggttca ggtgctacag aattccactg tctgctcgg
 780
 tctactagag actcgggaat gaagtttcga aattcatctg ttgccatggg agcctcactt
 840
 tcttgctcag aatattccct aaaggtaaca gatgtgacca aagtaaggac tttgaatgct
 900
 atcgcaaaga acatcctggt gtagccagac ctctctgaga gacatggata tcacaggatg
 960
 aaggtagaac tataatctgc aattctctat gacacagctt taaccttctt ctctggccag
 1020
 gacagtgcga atctttgttt taagtttcac atggccatgg agaattgtgc caagaagaaa
 1080
 aagaatttga aacagagata cagtcacttc ctttgcttag tcttaccagt gattgtcatc
 1140
 atggttaaag ctggtctgtg cttcttccat agacagaagc ttagtctggt ttcagtggaa
 1200
 ttaattgatg aactgggaaa attttaactg catggtatga attcagagtg tgacttaagg
 1260
 gtcaattcaa agcagtattt tgacttttca tttgtaaaat aaaaatttcc actattaaaa
 1320
 aaaaaaaaaa aaa
 1333

<210> 5760

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5760

Met	Lys	Arg	Gln	Gly	Ala	Ser	Ser	Glu	Arg	Lys	Arg	Ala	Arg	Ile	Pro
1			5					10						15	
Ser	Gly	Lys	Ala	Gly	Ala	Ala	Asn	Gly	Phe	Leu	Met	Glu	Val	Cys	Val
		20					25					30			
Asp	Ser	Val	Glu	Ser	Ala	Val	Asn	Ala	Glu	Arg	Gly	Gly	Ala	Asp	Arg
	35					40					45				
Ile	Glu	Leu	Cys	Ser	Gly	Leu	Ser	Glu	Gly	Gly	Thr	Thr	Pro	Ser	Met
	50					55					60				
Gly	Val	Leu	Gln	Val	Val	Lys	Gln	Ser	Val	Gln	Ile	Pro	Val	Phe	Val
65					70					75				80	
Met	Ile	Arg	Pro	Arg	Gly	Gly	Asp	Phe	Leu	Tyr	Ser	Asp	Arg	Glu	Ile
			85					90					95		
Glu	Val	Met	Lys	Ala	Asp	Ile	Arg	Leu	Ala	Lys	Leu	Tyr	Gly	Ala	Asp
		100						105					110		
Gly	Leu	Val	Phe	Gly	Ala	Leu	Thr	Glu	Asp	Gly	His	Ile	Asp	Lys	Glu
	115					120					125				
Leu	Cys	Met	Ser	Leu	Met	Ala	Ile	Cys	Arg	Pro	Leu	Pro	Val	Thr	Phe
	130					135					140				
His	Arg	Ala	Phe	Asp	Met	Val	His	Asp	Pro	Met	Ala	Ala	Leu	Glu	Thr
145					150					155				160	
Leu	Leu	Thr	Leu	Gly	Phe	Glu	Arg	Val	Leu	Thr	Ser	Gly	Cys	Asp	Ser
			165					170					175		
Ser	Ala	Leu	Glu	Gly	Leu	Pro	Leu	Ile	Lys	Arg	Leu	Ile	Glu	Gln	Ala

[illegible]

```
<210> 5761
<211> 1452
<212> DNA
<213> Homo sapiens
```

```

<400> 5761
nnaccatctt aaggacagaa aagctacagg actctaggag gccaccgtcc tgatttggga
60
agtccaactt actttggcca gacagcagct aagctgggtt atcccatcag cctggattgg
120
tgaaactgaa tcacaggaga tatttccagg tttgctggga tgggaaacct gctcaaagtc
180
cttaccaggg aaattgaaaa ctatccacac tttttcctgg attttgaaaa tgctcagcct
240
acagaaggag agagagaaat ctggaaccag atcagcgccg tccttcagga ttctgagagc
300
atccttgtag acctgcaggc ttacaaaggc gcaggcccag agatccgaga tgcaattcaa
360
aatcccaatg acattcagct tcaagaaaaa gcttggaatg cggtgtgccc tcttgttgtg
420
aggctaaaga gattttacga gttttccatt agactagaaa aagctcttca gagtattattg
480
gaatctctga cttgtccacc ctacacacca acccaacacc tggaaaggga acaggccctg
540
gcaaaggagt ttgccgaaat ttacatttt acccttcgat tcgatgagct gaagatgagg
600
aacccggtta ttcagaatga cttcagctac tacagaagaa caatcagtcg caaccgcatc
660
aacaacatgc acctagacat tgagaatgaa gtcaataatg agatggccaa tcgaatgtcc
720
ctcttctatg cagaagccac gccaatgctg aaaaccctta gcaatgccac aatgcacttt
780
gtctctgaaa acaaaaactct gccaatagag aacaccacag actgcctcag cacaatgaca
840
agtgtctgta aagtcattgct ggaaactccg gagtacagaa gtaggtttac gagtgaagag
900
accctgatgt tctgcatgag ggtgatggtg ggagtcattc tcctctatga ccatgtccac
960
cctgtggggag ctttctgcaa gacatccaag atcgatatga aaggctgcat aaaagttttg
1020

```

aaggagcagg ccccagacag tgtggagggg ctgctaaatg ccctcagggt cactacaaag
 1080
 cacttgaacg atgaatcaac ttccaaacag attcgagcaa tgcttcagta gagctctgct
 1140
 caaagaagag gatctatgtg ctgacctcag aagatgtata tgtttacata atttaataca
 1200
 gattgatgtt aatacttgtg tatttacata accgtttcct tcttgctact gaaatatatg
 1260
 gaccttaatt tgtatcctga ctgactcaac ccagcagagc ataaattgac ttgagagcct
 1320
 tacctttgat gtctgaaatg aaacccctt ctccaaaggc aaaattcgga gactttgatc
 1380
 ttgtctactg gagtccttta acaacaccta taacgataaa aaattcctaa ttgtttgtgg
 1440
 tagtaaaaaa aa
 1452

<210> 5762

<211> 333

<212> PRT

<213> Homo sapiens

<400> 5762

Ile	Thr	Gly	Asp	Ile	Ser	Arg	Phe	Ala	Gly	Met	Gly	Asn	Leu	Leu	Lys
1				5					10					15	
Val	Leu	Thr	Arg	Glu	Ile	Glu	Asn	Tyr	Pro	His	Phe	Phe	Leu	Asp	Phe
			20					25					30		
Glu	Asn	Ala	Gln	Pro	Thr	Glu	Gly	Glu	Arg	Glu	Ile	Trp	Asn	Gln	Ile
		35					40					45			
Ser	Ala	Val	Leu	Gln	Asp	Ser	Glu	Ser	Ile	Leu	Ala	Asp	Leu	Gln	Ala
	50					55					60				
Tyr	Lys	Gly	Ala	Gly	Pro	Glu	Ile	Arg	Asp	Ala	Ile	Gln	Asn	Pro	Asn
65					70				75					80	
Asp	Ile	Gln	Leu	Gln	Glu	Lys	Ala	Trp	Asn	Ala	Val	Cys	Pro	Leu	Val
			85						90					95	
Val	Arg	Leu	Lys	Arg	Phe	Tyr	Glu	Phe	Ser	Ile	Arg	Leu	Glu	Lys	Ala
		100						105					110		
Leu	Gln	Ser	Leu	Leu	Glu	Ser	Leu	Thr	Cys	Pro	Pro	Tyr	Thr	Pro	Thr
		115					120					125			
Gln	His	Leu	Glu	Arg	Glu	Gln	Ala	Leu	Ala	Lys	Glu	Phe	Ala	Glu	Ile
		130				135					140				
Leu	His	Phe	Thr	Leu	Arg	Phe	Asp	Glu	Leu	Lys	Met	Arg	Asn	Pro	Ala
145					150					155				160	
Ile	Gln	Asn	Asp	Phe	Ser	Tyr	Tyr	Arg	Arg	Thr	Ile	Ser	Arg	Asn	Arg
			165						170					175	
Ile	Asn	Asn	Met	His	Leu	Asp	Ile	Glu	Asn	Glu	Val	Asn	Asn	Glu	Met
			180					185					190		
Ala	Asn	Arg	Met	Ser	Leu	Phe	Tyr	Ala	Glu	Ala	Thr	Pro	Met	Leu	Lys
		195					200					205			
Thr	Leu	Ser	Asn	Ala	Thr	Met	His	Phe	Val	Ser	Glu	Asn	Lys	Thr	Leu
	210				215						220				
Pro	Ile	Glu	Asn	Thr	Thr	Asp	Cys	Leu	Ser	Thr	Met	Thr	Ser	Val	Cys
225					230					235				240	
Lys	Val	Met	Leu	Glu	Thr	Pro	Glu	Tyr	Arg	Ser	Arg	Phe	Thr	Ser	Glu

				245					250					255			
Glu	Thr	Leu	Met	Phe	Cys	Met	Arg	Val	Met	Val	Gly	Val	Ile	Ile	Leu		
			260					265					270				
Tyr	Asp	His	Val	His	Pro	Val	Gly	Ala	Phe	Cys	Lys	Thr	Ser	Lys	Ile		
		275					280					285					
Asp	Met	Lys	Gly	Cys	Ile	Lys	Val	Leu	Lys	Glu	Gln	Ala	Pro	Asp	Ser		
	290					295					300						
Val	Glu	Gly	Leu	Leu	Asn	Ala	Leu	Arg	Phe	Thr	Thr	Lys	His	Leu	Asn		
305					310					315					320		
Asp	Glu	Ser	Thr	Ser	Lys	Gln	Ile	Arg	Ala	Met	Leu	Gln					
				325					330								

<210> 5763

<211> 3840

<212> DNA

<213> Homo sapiens

<400> 5763

60	nctcctcccc	tccccaagat	ggcgctccttg	ctgcagtcgg	accggggttct	ctatctagtc
120	caggggagaaa	agaaggttcg	ggccccgctc	tcgcaactct	acttctgccg	ctattgtagc
180	gaactgcggt	cgctggaatg	tgtgtctcac	gaggtggact	cccattattg	tcccagttgt
240	ttagaaaaata	tgccatcggc	tgaagccaaa	ctaaaaaaga	atagatgtgc	caattgtttt
300	gactgtcctg	gctgcatgca	caccctctct	actcggggcca	cgagcatctc	cacacagctt
360	ccagatgacc	cagccaagac	caccatgaag	aaagcctatt	acctggcatg	tggattttgt
420	cgctggacgt	ctagagatgt	gggcatggca	gacaaatctg	tagctagtgg	cggttggcag
480	gaacctgaaa	atcctcacac	acaacggatg	aacaaattga	ttgaatatta	ccagcagctt
540	gctcagaaa	agaaggttga	gcgagatcgc	aagaaactgg	cacgacgtag	aaactatatg
600	cctctggcct	tttcggacaa	atatggtctt	ggaaccaggc	ttcagcgacc	acgagctggg
660	gcatccatca	gtacccttgc	cggactttcc	cttaaagaag	gagaggatca	gaaagaggta
720	aaagattgagc	cagctcaggc	tgtggatgaa	gtggaacctc	tacctgaaga	ctattataca
780	agaccagtaa	atttaacaga	ggtaacaacc	cttcagcagc	gtctgttaca	gcctgacttc
840	cagccagtct	gtgcttcaca	gctctatcct	cgccacaaac	atcttctgat	caaacgggtc
900	ctgcgctgcc	gtaaatgtga	acataatttg	agcaagccag	aatttaaccc	aacgtcaatc
960	aaattcaaaa	tccagctggg	cgctgtcaat	tatatccag	aagtgagaat	catgtcaatt
1020	cccaaccttc	gctacatgaa	ggagagccag	gtcctcctga	ctcttacaaa	tccagttgag
1080	aacctcacc	atgtgactct	cttcgagtgt	gaggaggggg	accctgatga	tatcaacagc

actgctaagg tgggtgggtgcc tcccaaagag ctcgtttttag ctggcaagga tgcagcagca
1140
gagtacgatg agttggcaga acctcaagac tttcaggacg atcctgacat tatagccttc
1200
agaaaggcca acaaagtggg tattttcatc aaagttacac cacagcgtga ggaggggtgaa
1260
gtgaccgtgt gcttcaagat gaagcatgat tttaaaaacc tggcagcccc cattcgcccc
1320
attgaagaaa gtgaccaggg aacagaagtc atctgggtca cccagcatgt ggaacttagc
1380
ttggggccac ttcttcctta aaaggttcca ctggagggga gatcccaaag gacagtatca
1440
ccgtaaacct gcgttaaaat gtggaagctg ctgcttcatt aggcttgtt tataacgatg
1500
taccatgca ctacggaatt ctattgctaa gaaagtggga gcataggcaa ggcattggga
1560
acacagggta gctgctgttg ctcttgctct caccctgtt gacaccagta agtctgtgtc
1620
tccctcactg aaccctgcac gttgagtaac agcagcataa ttccatccta ggaaagggga
1680
tgggtgttcc ttggaatggc attgtattta ccacctgaga aactctgtac tgtctcttga
1740
tctgatctca ctaaggatca caatgtcaca gatgaaactt aaatgataac ccaaaggtag
1800
acctgctgtt aatgatccag cattgggtcac aatgtaccaa ctgctttctg cattccgtta
1860
aatatcatct aacagtctaa aacatatccc ttcattgcca taatgggtgc cattttgcca
1920
tagatttcca tataactgaa aaactgaatt gtcactttat ctttagtata atgatgattg
1980
gaaaaacctg tgaagtgtt aaggcactct catttgcctt ctttttctaa gtgaatacag
2040
gacacgtatt agttgttctt aatttttttc ccagtaaaat atggatcttt taagaagaat
2100
ttgagaagca aacaattaca tgtcatgtca agggggtagc agattccatt cgttttcaat
2160
attgccacaa taccagggga ttaatgctgc cacagggggg caatctttat ttgtcttact
2220
tcttaccctt tccctgttct gcctctttta ctcagttaag ttgttctgtt tgggacctgg
2280
aaaagaaccc aaagaaaacc tgagtggaca gggttcatttc tggaatgcag aaaacatttt
2340
aaaggctaga tttttagaat attctcaact agcattcttt ccattgattt gaaggggaaa
2400
ttaactatta taatctcttg aatccaaaac tggatattaa gaactttccc ccttactaag
2460
tttaagactt ttgtcatgtg gtgagtcaaa taagaccatt ttgattgtaa accataaaat
2520
agttcagcaa gtagccaca gttctggcct aacagcagac ttgctgtttt cacttggtat
2580
cctggagttg gggtgctaac cttaatttct atgatgtttt ctaaaatgaa acttgataaa
2640
gtagaccacc agctgcaccg tgttttctgt aaaagtattg ttagtaagtg gccaagagac
2700

ttgaggaaaa tacagatttt ttgtttacct tgggtcttgtt ttaagtctta aaaaatttaa
 2760
 gataacatta taatgtagaa tacagatggg acatagtcct tgtaagcttc ccttgaaaat
 2820
 gttttaaata ttttaggaagc ttttaaaaga cactaaattg tactctaaaa gacactaaat
 2880
 tgtactaatt gtacaaaggt caagccaatt ttatgaaaca gtccctacaga gtaatatatg
 2940
 tgatgcagtg taagaaggaa aatactcatc tctaacatta tggtaataac atttagcctc
 3000
 ttaggagttg gagcaggggg atgggtaatt acagatttgc agactataga aagagtttca
 3060
 tttttttgtg accccacaga gtctcaaatt tttatttcac tacctgctag agcctactgt
 3120
 gaaatcactg ctccatattt gccagtggag gaaatgggca tagagtagag aatagcttca
 3180
 tatgtttaca cgtttgcata gactacacac atgtcatgcg tttatggcag gtagctggta
 3240
 tttattcccc aaagtaataa tggtgaagta tgggtctcat cattcccata cacagaaaca
 3300
 caaacactt tgatcataaa cttttttctt cagaagccaa actaacttgc agaataatag
 3360
 agccactggt ttaatgtttc ctcaagatag gtttttagtgt aagctagtat tctgtgtgtt
 3420
 cgtagaaatg attcaatacc tgcagctggt gaattaggaa ttgtatttgt tgcctttttt
 3480
 atattagatg aggtgcaaaa attttaatgc tagtcagtat gcaccaccac aggaaagtta
 3540
 gatcccatta gcacttgaaa ctacagcttt ggaaacttag gctaagttaa tttggatttg
 3600
 ttacttgatt cacctactga ctttttcttt tgtttgaagt gcttatcagc ataatgagct
 3660
 aagtgtcatg catatttgtg aagaaacacc ctttttggtc ctttttgga cagagaggta
 3720
 ctccctgatc tttatgaatg acaggttact gttttgcctt attgcttaac ttaatgtagt
 3780
 gaaataaagc agacaaagct tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3840

<210> 5764

<211> 466

<212> PRT

<213> Homo sapiens

<400> 5764

Xaa Pro Pro Leu Pro Lys Met Ala Ser Leu Leu Gln Ser Asp Arg Val
 1 5 10 15
 Leu Tyr Leu Val Gln Gly Glu Lys Lys Val Arg Ala Pro Leu Ser Gln
 20 25 30
 Leu Tyr Phe Cys Arg Tyr Cys Ser Glu Leu Arg Ser Leu Glu Cys Val
 35 40 45
 Ser His Glu Val Asp Ser His Tyr Cys Pro Ser Cys Leu Glu Asn Met
 50 55 60
 Pro Ser Ala Glu Ala Lys Leu Lys Lys Asn Arg Cys Ala Asn Cys Phe

<210> 5765
<211> 3220

<212> DNA

<213> Homo sapiens

<400> 5765

cacgaggccc cacgcctcag gcaactgggt gttaccgagg aagatggcgg cgccagaccc
60
gaggcgctag ggaagatcgc accgcggacg cccgctgagc ttggcgcacg ggccgaccag
120
gagctggtga ctgccctcat gtgtgatttg cggcggccag cggcaggtgg gatgatggac
180
ttggcctacg tctgtgagtg ggagaaatgg tccaagagca cccactgccc atcggtgccc
240
ctggcctgcg cctggtcctg ccgaaatctc atcgccctca ccatggacct gcgcagcgat
300
gaccaggacc tgaccgcgat gatccacatc ctggacacgg agcaccctg ggacctgcac
360
tcgatccctt cagagcacca cgaggccatc acctgcctgg agtgggacca gtcaggctcc
420
cggctcctgt cagcagatgc cgacgggcag atcaagtgtt ggagcatggc ggaccacctg
480
gctaatagct gggagagctc agtgggcagc ctagtggagg gggaccccat tgtggccctg
540
tcctggctgc acaatggtgt gaaactggcc ctgcacgtgg agaagtcggg cgctccagc
600
ttcggggaga agttctcccg agtcaagttc tcaccgtcgc tcacgtgttt cggcggcaag
660
cccatggagg gctggatcgc ggtgacggtc agcggcctgg tcaccgtgtc cctgctgaag
720
cccagcgggc aggtgctgac gtccaccgag agcctgtgcc ggctgcgcgg ccgcgtggcc
780
ctggccgaca tcgccttcac cggcggcgcc aacatcgtgg tggccacggc ggacggcagc
840
agcgcgtcgc ccgtgcagtt ctacaagggt tgctgagcgc tggtagcga gaagtgcgt
900
atcgacacgg agatcctgcc ctccctgttc atgcgtgca ccaccgacct caaccgcaag
960
gacaagtttc ccgccatcac ccacctcaag ttccctggccc gggacatgtc ggagcaggtg
1020
cttttgtgcg cgtccagcca gaccagcagc atcgtggagt gctggtcctt gcgcaaggag
1080
ggactccccg tgaacaacat cttccagcag atctccccg tggttggcga caaacagccc
1140
acaattctca aatggcggat cctatcgccc accaacgacg tggaccgtgt gtcggccgtg
1200
gcgctgcccc agctgcccct ttcgctcacc aacaccgacc tcaagggtggc cagcgacaca
1260
cagttctacc ctggcctcgg gctggccctg gccttcacg acggcagcgt ccacatcgtg
1320
caccggctct cactgcagac catggcggtc ttctacagct ccgcggcccc gaggcctgtg
1380
gatgagccgg ccatgaagcg cccccgcacc gcgggccccg ccgtccactt aaaggctatg
1440
cagctatcgt ggacgtcact ggccctgggtg gggattgaca gccacgggaa gctgagcgtg
1500

ctccgcctct caccttccat gggccacccg ctggagggtg ggctggcgct gcggcacctg
1560
ctcttcctgc tggagtactg catggtgacc ggctacgact ggtgggacat cctgctgcac
1620
gtgcagccca gtatggtaca gagcctggtg gagaagctgc acgaggagta cacgcgccag
1680
accgctgccc tgcagcaggc cctctccacc cggatccctg ccatgaaggc ctgctctg
1740
aagctgtcgc cctgcacggc gaccgcgtg tgcgactacc acaccaagct cttcctcatc
1800
gccatcagct ccacctgaa gtcgctgctg cggcccccact ttctcaacac gcctgacaag
1860
agccccggcg accggctgac cgagatctgc accaagatca ccgacgtcga cattgacaag
1920
gtcatgatca acctcaagac ggaggaatct gtgctggaca tgacacactg caggcgctgc
1980
agcagctctt gcagtgggtg ggcgacttcg tgctgtacct gctggccagc ctaccaaac
2040
agccctgccc cacctcgagc cctgccccca cctcgagacc ctccccacc tcggagccct
2100
ccccacctc ggagccctcc tctccatgaa gcctctgctg gttccctgct gaggccgggc
2160
cacagcttcc tgcgggacgg cacctcgctg ggcattgctc gggaattgat ggtggctatc
2220
cgcatctggg gccttctgaa gccagctgc ctgcccgtgt atacggccac ctcgatacc
2280
caggacagca tgtccctgct cttccgctg ctcaccaagc tctggatctg ctgtcgcgat
2340
gaggggcccag cgagcgagcc ggatgaggcg ctggtggatg aatgctgcct gctgcccagc
2400
cagctgctta tccccagcct ggactggctg ccagccagcg acggcctggt tagccgcctg
2460
cagcccaagc agccccctc tctgcagttt ggccggggcg ccacgctgcc tggcagtgc
2520
gccaccctgc agctcgacgg cctcgccagg gcccaggcc agcccaagat cgaccacctg
2580
cggaggctgc acctggcg tggccccacg gaggaatgca aggcctgcac caggctgcgc
2640
tgtgtcacca tgctcaagtc gcccaacaga accacggcgg tgaagcagtg ggagcagcgc
2700
tggtatcaaga actgcctgtg cgggtgggctc tggtggcggg tgccccctcag ctaccctga
2760
gccagctgc ccctcagta ctcctcagct acccctcagc tgccccctgag cccggctgct
2820
gcaagagcca ccgctcggc tggactctcc tcggcgcggt taacctcagc ccgcctgca
2880
gggctgttga aggcctggg ccggacgcct gcgtgaccag cagagcttct gaggaagccc
2940
ctgcctttgt ccagctgggc ccgagctcca cacaccactc tcccaggacc ccagatccct
3000
ggaccatctg catccagagg accgtccgtg acggccgggg gtccaggcgg acctgtggg
3060
gacccggctc gggcgctctc tcggtttctc tgcctcaccg gcggagagcg ctgaacctgg
3120

acaagcagcg gctgggaagg acaggtccaa taaacgcct ctgcgccccca aaaaaaaaaa
 3180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3220

<210> 5766

<211> 873

<212> PRT

<213> Homo sapiens

<400> 5766

Met	Cys	Asp	Leu	Arg	Arg	Pro	Ala	Ala	Gly	Gly	Met	Met	Asp	Leu	Ala
1				5					10					15	
Tyr	Val	Cys	Glu	Trp	Glu	Lys	Trp	Ser	Lys	Ser	Thr	His	Cys	Pro	Ser
			20					25					30		
Val	Pro	Leu	Ala	Cys	Ala	Trp	Ser	Cys	Arg	Asn	Leu	Ile	Ala	Phe	Thr
			35				40					45			
Met	Asp	Leu	Arg	Ser	Asp	Asp	Gln	Asp	Leu	Thr	Arg	Met	Ile	His	Ile
	50					55				60					
Leu	Asp	Thr	Glu	His	Pro	Trp	Asp	Leu	His	Ser	Ile	Pro	Ser	Glu	His
	65				70					75				80	
His	Glu	Ala	Ile	Thr	Cys	Leu	Glu	Trp	Asp	Gln	Ser	Gly	Ser	Arg	Leu
			85					90						95	
Leu	Ser	Ala	Asp	Ala	Asp	Gly	Gln	Ile	Lys	Cys	Trp	Ser	Met	Ala	Asp
			100					105					110		
His	Leu	Ala	Asn	Ser	Trp	Glu	Ser	Ser	Val	Gly	Ser	Leu	Val	Glu	Gly
			115				120					125			
Asp	Pro	Ile	Val	Ala	Leu	Ser	Trp	Leu	His	Asn	Gly	Val	Lys	Leu	Ala
	130						135				140				
Leu	His	Val	Glu	Lys	Ser	Gly	Ala	Ser	Ser	Phe	Gly	Glu	Lys	Phe	Ser
	145				150					155				160	
Arg	Val	Lys	Phe	Ser	Pro	Ser	Leu	Thr	Leu	Phe	Gly	Gly	Lys	Pro	Met
			165					170						175	
Glu	Gly	Trp	Ile	Ala	Val	Thr	Val	Ser	Gly	Leu	Val	Thr	Val	Ser	Leu
			180					185					190		
Leu	Lys	Pro	Ser	Gly	Gln	Val	Leu	Thr	Ser	Thr	Glu	Ser	Leu	Cys	Arg
		195					200				205				
Leu	Arg	Gly	Arg	Val	Ala	Leu	Ala	Asp	Ile	Ala	Phe	Thr	Gly	Gly	Gly
	210					215					220				
Asn	Ile	Val	Val	Ala	Thr	Ala	Asp	Gly	Ser	Ser	Ala	Ser	Pro	Val	Gln
	225				230					235				240	
Phe	Tyr	Lys	Val	Cys	Val	Ser	Val	Val	Ser	Glu	Lys	Cys	Arg	Ile	Asp
			245					250						255	
Thr	Glu	Ile	Leu	Pro	Ser	Leu	Phe	Met	Arg	Cys	Thr	Thr	Asp	Leu	Asn
			260					265					270		
Arg	Lys	Asp	Lys	Phe	Pro	Ala	Ile	Thr	His	Leu	Lys	Phe	Leu	Ala	Arg
		275					280					285			
Asp	Met	Ser	Glu	Gln	Val	Leu	Leu	Cys	Ala	Ser	Ser	Gln	Thr	Ser	Ser
	290					295					300				
Ile	Val	Glu	Cys	Trp	Ser	Leu	Arg	Lys	Glu	Gly	Leu	Pro	Val	Asn	Asn
	305					310				315				320	
Ile	Phe	Gln	Gln	Ile	Ser	Pro	Val	Val	Gly	Asp	Lys	Gln	Pro	Thr	Ile
			325					330						335	
Leu	Lys	Trp	Arg	Ile	Leu	Ser	Ala	Thr	Asn	Asp	Leu	Asp	Arg	Val	Ser

340 345 350
 Ala Val Ala Leu Pro Lys Leu Pro Ile Ser Leu Thr Asn Thr Asp Leu
 355 360 365
 Lys Val Ala Ser Asp Thr Gln Phe Tyr Pro Gly Leu Gly Leu Ala Leu
 370 375 380
 Ala Phe His Asp Gly Ser Val His Ile Val His Arg Leu Ser Leu Gln
 385 390 395 400
 Thr Met Ala Val Phe Tyr Ser Ser Ala Ala Pro Arg Pro Val Asp Glu
 405 410 415
 Pro Ala Met Lys Arg Pro Arg Thr Ala Gly Pro Ala Val His Leu Lys
 420 425 430
 Ala Met Gln Leu Ser Trp Thr Ser Leu Ala Leu Val Gly Ile Asp Ser
 435 440 445
 His Gly Lys Leu Ser Val Leu Arg Leu Ser Pro Ser Met Gly His Pro
 450 455 460
 Leu Glu Val Gly Leu Ala Leu Arg His Leu Leu Phe Leu Leu Glu Tyr
 465 470 475 480
 Cys Met Val Thr Gly Tyr Asp Trp Trp Asp Ile Leu Leu His Val Gln
 485 490 495
 Pro Ser Met Val Gln Ser Leu Val Glu Lys Leu His Glu Glu Tyr Thr
 500 505 510
 Arg Gln Thr Ala Ala Leu Gln Gln Val Leu Ser Thr Arg Ile Leu Ala
 515 520 525
 Met Lys Ala Ser Leu Cys Lys Leu Ser Pro Cys Thr Val Thr Arg Val
 530 535 540
 Cys Asp Tyr His Thr Lys Leu Phe Leu Ile Ala Ile Ser Ser Thr Leu
 545 550 555 560
 Lys Ser Leu Leu Arg Pro His Phe Leu Asn Thr Pro Asp Lys Ser Pro
 565 570 575
 Gly Asp Arg Leu Thr Glu Ile Cys Thr Lys Ile Thr Asp Val Asp Ile
 580 585 590
 Asp Lys Val Met Ile Asn Leu Lys Thr Glu Glu Phe Val Leu Asp Met
 595 600 605
 Thr His Cys Arg Arg Cys Ser Ser Ser Cys Ser Gly Trp Ala Thr Ser
 610 615 620
 Cys Cys Thr Cys Trp Pro Ala Tyr Pro Thr Ser Pro Ala Pro Pro Arg
 625 630 635 640
 Ser Pro Ala Pro Pro Arg Ser Pro Pro Pro Arg Ser Pro Pro Pro
 645 650 655
 Pro Arg Ser Pro Pro Leu His Glu Ala Ser Ala Gly Ser Leu Leu Arg
 660 665 670
 Pro Gly His Ser Phe Leu Arg Asp Gly Thr Ser Leu Gly Met Leu Arg
 675 680 685
 Glu Leu Met Val Val Ile Arg Ile Trp Gly Leu Leu Lys Pro Ser Cys
 690 695 700
 Leu Pro Val Tyr Thr Ala Thr Ser Asp Thr Gln Asp Ser Met Ser Leu
 705 710 715 720
 Leu Phe Arg Leu Leu Thr Lys Leu Trp Ile Cys Cys Arg Asp Glu Gly
 725 730 735
 Pro Ala Ser Glu Pro Asp Glu Ala Leu Val Asp Glu Cys Cys Leu Leu
 740 745 750
 Pro Ser Gln Leu Leu Ile Pro Ser Leu Asp Trp Leu Pro Ala Ser Asp
 755 760 765
 Gly Leu Val Ser Arg Leu Gln Pro Lys Gln Pro Leu Arg Leu Gln Phe

770		775		780
Gly Arg Ala Pro Thr Leu	Pro Gly Ser Ala Ala	Thr Leu Gln Leu Asp		
785		790		800
Gly Leu Ala Arg Ala Pro	Gly Gln Pro Lys Ile	Asp His Leu Arg Arg		
	805		810	815
Leu His Leu Gly Ala Cys	Pro Thr Glu Glu Cys	Lys Ala Cys Thr Arg		
	820		825	830
Cys Gly Cys Val Thr Met	Leu Lys Ser Pro Asn	Arg Thr Thr Ala Val		
	835		840	845
Lys Gln Trp Glu Gln Arg	Trp Ile Lys Asn Cys	Leu Cys Gly Gly Leu		
	850		855	860
Trp Trp Arg Val Pro	Leu Ser Tyr Pro			
865		870		

<210> 5767

<211> 1910

<212> DNA

<213> Homo sapiens

<400> 5767

```

ggtagaaaaa tacacctatt aacaacatta gtaaacacca gaaaccatct aaaaggaatc
60
tttacatggg caagacgata tcctctctgt gagaccacaca agtttggttt gagttactcc
120
tcagtatcgt gggttttgct gctattctga agggatcccc catcacgctg gcagctgtgt
180
gccaggagag accctgaggg ctgcctcacc acagcaggaa cgcccttctc agtcccagcc
240
caatcctctc tcacactgcg gtgctctgtc cctatggaaa cagcctctgt atgtgtgtgt
300
gtgtgtgtgt gtgtgtgtgt gtgtgaataa tatatggaat aaagtttgag attccctgct
360
ttttcatggt accttagcct caattttaaa cttacattgt ttgttaaaat tatcaaatgg
420
acaacctcat tgctatggaa caaaaaagac tgtgaggaaa aagaatcata acttgaaaaa
480
aaataagtga aaaggcattg agagattgct aagatttggt aagttaaaac aataatatat
540
ctagaaaaga ctgtgaaaat atatatctca aaagagaaca aggcatagtc agaaggctca
600
gtaaaacaat tacttttaaaa gctgactaat aaaaagggtg agtgaaagaa ctcttccatc
660
cttgaccctt cctcacttcc tccctccgac tctaccagtc tggatgcact aaagcagaat
720
aacctaaaag ccatgaaaaa gtgctgggtat ttttcaggat ctcttcaaga caccttcggt
780
cttggttaacc tgaattctct ctctgatcaa ggcagctgat ggactttcaa tgtatttggg
840
gatgccgggt caaaaacgtc atcatcatct tctgtcctt cttctatcgg tttcatcttg
900
gcagaggctc gctggtgtgg ggatgacaca tgaagagagg acatgctgga ggtactccga
960
agaaaactggt gcaagccgtc gtcactgtca ctggagctgg ctatactggt cctcatttcc
1020

```

aacatggaga tctgtgtgca gaggtgagc tgatgttcca gctttttggc tttcttatca
 1080
 ttttaaggtgg gatcattcaa tgagtagagc ttatttgtga tgtcttttcc aataagatac
 1140
 ctaaagattt catacaagaa aggttctgat tccagaaaagt atgttaatct ttctcttgac
 1200
 cagcataaaa atctgcagtt atcatctgca ataatgggtga cctggaattt ttcaccttg
 1260
 tgcattctgag ttgatctaaa ttcaggagaa tctataaagg cacaggggta aatgttatgc
 1320
 agaaaatgtc ctcgatagga gaccttcatt tttcccttca agagaatact cagacgggtca
 1380
 tcaactgagg ttttatcctc tgcagcataa gtttggccct ttttcaagg tggatcatg
 1440
 caaaactgtc cagttagtct tctgaacaaa tctggaggca cacggagtgg ttcaaacaat
 1500
 cgccgggtaca tgccactgag ttccttttca atctttaccg gtctcttctt gtataaaaga
 1560
 tacgacagat gcaaaatgtt gacaccaag aacacagagt tccagatcat tatatccaag
 1620
 gcacatcggg agagagtggc ccagacgata taaagggtac atcctagagt taacattccc
 1680
 ctaagaaata tcatatgaag gtgaagagta gttggaataa ccaaccaac tgcaaaacaa
 1740
 atatttgcta catgaaaaac cagatgatgt atctctctcc agttttcaca agtgggtctta
 1800
 ttggaaggca caggtatgat actttctaac tcagggtgtaa aacctatggc agttgattct
 1860
 ctcaatgggc tggactctgt ataattcatt ttgaaaatcc cggtgggtcc
 1910

<210> 5768

<211> 360

<212> PRT

<213> Homo sapiens

<400> 5768

Met	Asn	Tyr	Thr	Glu	Ser	Ser	Pro	Leu	Arg	Glu	Ser	Thr	Ala	Ile	Gly
1				5				10						15	
Phe	Thr	Pro	Glu	Leu	Glu	Ser	Ile	Ile	Pro	Val	Pro	Ser	Asn	Lys	Thr
			20					25					30		
Thr	Cys	Glu	Asn	Trp	Arg	Glu	Ile	His	His	Leu	Val	Phe	His	Val	Ala
			35				40					45			
Asn	Ile	Cys	Phe	Ala	Val	Gly	Leu	Val	Ile	Pro	Thr	Thr	Leu	His	Leu
			50			55					60				
His	Met	Ile	Phe	Leu	Arg	Gly	Met	Leu	Thr	Leu	Gly	Cys	Thr	Leu	Tyr
65				70				75						80	
Ile	Val	Trp	Ala	Thr	Leu	Tyr	Arg	Cys	Ala	Leu	Asp	Ile	Met	Ile	Trp
			85					90					95		
Asn	Ser	Val	Phe	Gly	Val	Asn	Ile	Leu	His	Leu	Ser	Tyr	Leu	Leu	
			100				105						110		
Tyr	Lys	Lys	Arg	Pro	Val	Lys	Ile	Glu	Lys	Glu	Leu	Ser	Gly	Met	Tyr
			115				120						125		
Arg	Arg	Leu	Phe	Glu	Pro	Leu	Arg	Val	Pro	Pro	Asp	Leu	Phe	Arg	Arg

130		135		140
Leu Thr Gly Gln Phe Cys Met Ile Gln Thr	Leu Lys Lys Gly Gln Thr			
145	150	155	160	
Tyr Ala Ala Glu Asp Lys Thr Ser Val Asp Asp Arg Leu Ser Ile Leu				
	165	170	175	
Leu Lys Gly Lys Met Lys Val Ser Tyr Arg Gly His Phe Leu His Asn				
	180	185	190	
Ile Tyr Pro Cys Ala Phe Ile Asp Ser Pro Glu Phe Arg Ser Thr Gln				
	195	200	205	
Met His Lys Gly Glu Lys Phe Gln Val Thr Ile Ile Ala Asp Asp Asn				
	210	215	220	
Cys Arg Phe Leu Cys Trp Ser Arg Glu Arg Leu Thr Tyr Phe Leu Glu				
225	230	235	240	
Ser Glu Pro Phe Leu Tyr Glu Ile Phe Arg Tyr Leu Ile Gly Lys Asp				
	245	250	255	
Ile Thr Asn Lys Leu Tyr Ser Leu Asn Asp Pro Thr Leu Asn Asp Lys				
	260	265	270	
Lys Ala Lys Lys Leu Glu His Gln Leu Ser Leu Cys Thr Gln Ile Ser				
	275	280	285	
Met Leu Glu Met Arg Asn Ser Ile Ala Ser Ser Ser Asp Ser Asp Asp				
	290	295	300	
Gly Leu His Gln Phe Leu Arg Ser Thr Ser Ser Met Ser Ser Leu His				
305	310	315	320	
Val Ser Ser Pro His Gln Arg Ala Ser Ala Lys Met Lys Pro Ile Glu				
	325	330	335	
Glu Gly Ala Glu Asp Asp Asp Asp Val Phe Glu Pro Ala Ser Pro Asn				
	340	345	350	
Thr Leu Lys Val His Gln Leu Pro				
	355	360		

<210> 5769

<211> 427

<212> DNA

<213> Homo sapiens

<400> 5769

gctagcagtg gggttgctag tgacaccata gcatttggag agcatcacct ccctcctgtg

60

agtatggcat ccaactgtacc tcaactccctt cgtcaggcga gagataacac aatcatggat

120

ctgcagacac agctgaagga agtattaaga gaaaatgatc tcttgcgga ggatgtggaa

180

gtaaaggaga gcaaattgag ttcttcaatg aatagcatca agatcttctg gggcccagag

240

ctgaagaagg aacgagccct gagaaaggat gaagcttcca aaatcccat ttggaaggaa

300

cagtacagag ttgtacaaga ggaaaaccag gtaagttcta cgtgtgttta cctttatttg

360

ctgaattcat gtatataaat gaaatagcct ttttttccc ctttcctaga tttttccctt

420

cacgcgt

427

<210> 5770

<211> 85
 <212> PRT
 <213> Homo sapiens

<400> 5770
 Leu Gln Thr Gln Leu Lys Glu Val Leu Arg Glu Asn Asp Leu Leu Arg
 1 5 10 15
 Lys Asp Val Glu Val Lys Glu Ser Lys Leu Ser Ser Ser Met Asn Ser
 20 25 30
 Ile Lys Ile Phe Trp Gly Pro Glu Leu Lys Lys Glu Arg Ala Leu Arg
 35 40 45
 Lys Asp Glu Ala Ser Lys Ile Pro Ile Trp Lys Glu Gln Tyr Arg Val
 50 55 60
 Val Gln Glu Glu Asn Gln Val Ser Ser Thr Cys Val Tyr Leu Tyr Trp
 65 70 75 80
 Leu Asn Ser Cys Ile
 85

<210> 5771
 <211> 2539
 <212> DNA
 <213> Homo sapiens

<400> 5771
 gtacacattc caaaaagaga ttgatacact tgcaatgaag ggttcttgct tgagggagcc
 60
 aggagtcggg tttgtcttgc caatggaagt tggagtggag ccaactcccg ctgtgtgcct
 120
 gtcagatgtg ccaccccgcc acaactggcc aatgggggtga cggaaggcct ggactatggc
 180
 ttcataaagg aagtaacatt ccaactgtcat gggctacatc ttgcacgggtg ctccaaaact
 240
 cacctgtcag tcagaggcaa ctgggatgca gagattcctc tctgtaaacc agtcaactgt
 300
 ggacctcctg aagatcttgc ccatgggttc cctaattggt tttcctttat tcatgggggc
 360
 catatacagt atcagtgcct tcctgggttat aagctccatg gaaattcatc aagaagggtg
 420
 ctctccaatg gctcctggag tggcagctca ccttctgcc tgccttgag atgttcaca
 480
 ccagtaattg aatatggaac tgtcaatggg acagattttg actgtggaaa ggcagcccgg
 540
 attcagtgtc tcaaaggctt caagctccta ggactttctg aaatcacctg tgaagccgat
 600
 ggccagtgga gctctgggtt cccccactgt gaacacactt cttgtgggtc tcttccaatg
 660
 ataccaaagc cgttcatcag tgagaccagc tcttggaagg aaaatgtgat aacttacagc
 720
 tgcaggtctg gatatgtcat acaaggcagt tcagatctga tttgtacaga gaaaggggta
 780
 tggaaccagc cttatccagt ctgtgagccc ttgtcctgtg ggtccccacc gtctgtcgcc
 840
 aatgcagtgg caactggaga ggcacacacc tatgaaagtg aagtgaaact cagatgtctg
 900

gaaggttata cgatggatac agatacagat acaatcacct gtcagaaaga tggtcgctgg
960
ttccctgaga gaatctcctg cagtcctaaa aaatgtcctc tcccggaaaa cataacacat
1020
atacttgtag atggggacga ttccagtgtg aataggcaag ttctgtgtgc atgtgcagaa
1080
gggtatacct ttgagggagt taacatatca gtatgtcagc ttgatggaac ctgggagcca
1140
ccattctccg atgaatcttg cagtccagtt tcttgtggga aacctgaaag tccagaacat
1200
ggatttgtgg ttggcagtaa atacaccttt gaaagcacia ttatttatca gtgtgagcct
1260
ggctatgaac tagaggggaa cagggaaact gtctgccagg agaacagaca gtggagtggga
1320
gggttggaat tatgcaaaga gaccaggtgt gaaactccac ttgaatttct caatgggaaa
1380
gctgacattg aaaacaggac gactggaccc aacgtggtat attcctgcaa cagaggctac
1440
agtcttgaag ggccatctga ggcacactgc acagaaaatg gaacctggag ccaccagtc
1500
cctctctgca aaccaaactc atgccctgtt ccttttgtga tccccagaa tgctctgctg
1560
tctgaaaagg agttttatgt tgatcagaat gtgtccatca aatgtaggga aggttttctg
1620
ctgcagggcc acggcatcat tacctgcaac cccgacgaga cgtggacaca gacaagcgc
1680
aaatgtgaaa aaatctcatg tggccacca gtcacgtag aaaatgcaat tgctcgaggc
1740
gtacattatc aatatggaga catgatcacc tactcatggt acagtggata catgttggag
1800
ggtttctga ggagtgttg tttagaaaat ggaacatgga catcacctcc tatttgcaga
1860
gctgtctgtc gatttccatg tcagaatggg gggcatctgc caacgccccaa atgcttgttc
1920
ctgtccagag ggctggatgg ggcgcctctg tgaagaacca atctgcattc ttccctgtct
1980
gaacggaggt cgctgtgtgg ccccttacca gtgtgactgc ccgcctggct ggacggggtc
2040
tcgctgtcat acagctgttt gccagtctcc ctgcttaaat ggtggaaaat gtgtaagacc
2100
aaaccgatgt cactgtcttt cttcttggac gggacataac tgttccagga aaaggaggac
2160
tgggttttaa ccactgcacg accatctggc tctcccaaaa gcaggatcat ctctcctcgg
2220
tagtgcttgg gcaccttggg acttatgcaa agaaagtcca acatgggtgt gggcttctgt
2280
tagtaaaactt gttacttggg gttacttttt ttattttgtg atatattttg ttattccttg
2340
tgacatactt tcttacatgt ttccattttt aaatatgcct gtattttcta tataaaaatt
2400
atattaaata gatgctgtc taccctcaca aaatgtacat attctgctgt ctattgggaa
2460
agttcctggg acacattttt attcagttac ttaaaatgat ttttccatta aagtatattt
2520

tgctactaaa taaaaaaaaa
2539

<210> 5772

<211> 642

<212> PRT

<213> Homo sapiens

<400> 5772

Tyr	Thr	Cys	Asn	Glu	Gly	Phe	Leu	Leu	Glu	Gly	Ala	Arg	Ser	Arg	Val
1				5					10					15	
Cys	Leu	Ala	Asn	Gly	Ser	Trp	Ser	Gly	Ala	Thr	Pro	Asp	Cys	Val	Pro
			20					25					30		
Val	Arg	Cys	Ala	Thr	Pro	Pro	Gln	Leu	Ala	Asn	Gly	Val	Thr	Glu	Gly
		35					40					45			
Leu	Asp	Tyr	Gly	Phe	Met	Lys	Glu	Val	Thr	Phe	His	Cys	His	Gly	Leu
	50					55					60				
His	Leu	Ala	Arg	Cys	Ser	Lys	Thr	His	Leu	Ser	Val	Arg	Gly	Asn	Trp
65					70					75				80	
Asp	Ala	Glu	Ile	Pro	Leu	Cys	Lys	Pro	Val	Asn	Cys	Gly	Pro	Pro	Glu
				85					90					95	
Asp	Leu	Ala	His	Gly	Phe	Pro	Asn	Gly	Phe	Ser	Phe	Ile	His	Gly	Gly
			100					105					110		
His	Ile	Gln	Tyr	Gln	Cys	Phe	Pro	Gly	Tyr	Lys	Leu	His	Gly	Asn	Ser
	115						120					125			
Ser	Arg	Arg	Cys	Leu	Ser	Asn	Gly	Ser	Trp	Ser	Gly	Ser	Ser	Pro	Ser
	130					135					140				
Cys	Leu	Pro	Cys	Arg	Cys	Ser	Thr	Pro	Val	Ile	Glu	Tyr	Gly	Thr	Val
145					150					155					160
Asn	Gly	Thr	Asp	Phe	Asp	Cys	Gly	Lys	Ala	Ala	Arg	Ile	Gln	Cys	Phe
				165					170					175	
Lys	Gly	Phe	Lys	Leu	Leu	Gly	Leu	Ser	Glu	Ile	Thr	Cys	Glu	Ala	Asp
			180					185					190		
Gly	Gln	Trp	Ser	Ser	Gly	Phe	Pro	His	Cys	Glu	His	Thr	Ser	Cys	Gly
	195						200					205			
Ser	Leu	Pro	Met	Ile	Pro	Asn	Ala	Phe	Ile	Ser	Glu	Thr	Ser	Ser	Trp
	210					215					220				
Lys	Glu	Asn	Val	Ile	Thr	Ser	Cys	Arg	Ser	Gly	Tyr	Val	Ile	Gln	
225					230					235				240	
Gly	Ser	Ser	Asp	Leu	Ile	Cys	Thr	Glu	Lys	Gly	Val	Trp	Asn	Gln	Pro
				245					250					255	
Tyr	Pro	Val	Cys	Glu	Pro	Leu	Ser	Cys	Gly	Ser	Pro	Pro	Ser	Val	Ala
			260					265					270		
Asn	Ala	Val	Ala	Thr	Gly	Glu	Ala	His	Thr	Tyr	Glu	Ser	Glu	Val	Lys
			275				280						285		
Leu	Arg	Cys	Leu	Glu	Gly	Tyr	Thr	Met	Asp	Thr	Asp	Thr	Asp	Thr	Ile
	290					295					300				
Thr	Cys	Gln	Lys	Asp	Gly	Arg	Trp	Phe	Pro	Glu	Arg	Ile	Ser	Cys	Ser
305					310					315					320
Pro	Lys	Lys	Cys	Pro	Leu	Pro	Glu	Asn	Ile	Thr	His	Ile	Leu	Val	His
				325					330					335	
Gly	Asp	Asp	Phe	Ser	Val	Asn	Arg	Gln	Val	Ser	Val	Ser	Cys	Ala	Glu
			340					345					350		
Gly	Tyr	Thr	Phe	Glu	Gly	Val	Asn	Ile	Ser	Val	Cys	Gln	Leu	Asp	Gly

355	360	365
Thr Trp Glu Pro Pro Phe Ser Asp Glu Ser Cys Ser Pro Val Ser Cys		
370	375	380
Gly Lys Pro Glu Ser Pro Glu His Gly Phe Val Val Gly Ser Lys Tyr		
385	390	395
Thr Phe Glu Ser Thr Ile Ile Tyr Gln Cys Glu Pro Gly Tyr Glu Leu		
405	410	415
Glu Gly Asn Arg Glu Arg Val Cys Gln Glu Asn Arg Gln Trp Ser Gly		
420	425	430
Gly Val Ala Ile Cys Lys Glu Thr Arg Cys Glu Thr Pro Leu Glu Phe		
435	440	445
Leu Asn Gly Lys Ala Asp Ile Glu Asn Arg Thr Thr Gly Pro Asn Val		
450	455	460
Val Tyr Ser Cys Asn Arg Gly Tyr Ser Leu Glu Gly Pro Ser Glu Ala		
465	470	475
His Cys Thr Glu Asn Gly Thr Trp Ser His Pro Val Pro Leu Cys Lys		
485	490	495
Pro Asn Pro Cys Pro Val Pro Phe Val Ile Pro Glu Asn Ala Leu Leu		
500	505	510
Ser Glu Lys Glu Phe Tyr Val Asp Gln Asn Val Ser Ile Lys Cys Arg		
515	520	525
Glu Gly Phe Leu Leu Gln Gly His Gly Ile Ile Thr Cys Asn Pro Asp		
530	535	540
Glu Thr Trp Thr Gln Thr Ser Ala Lys Cys Glu Lys Ile Ser Cys Gly		
545	550	555
Pro Pro Ala His Val Glu Asn Ala Ile Ala Arg Gly Val His Tyr Gln		
565	570	575
Tyr Gly Asp Met Ile Thr Tyr Ser Cys Tyr Ser Gly Tyr Met Leu Glu		
580	585	590
Gly Phe Leu Arg Ser Val Cys Leu Glu Asn Gly Thr Trp Thr Ser Pro		
595	600	605
Pro Ile Cys Arg Ala Val Cys Arg Phe Pro Cys Gln Asn Gly Gly His		
610	615	620
Leu Pro Thr Pro Lys Cys Leu Phe Leu Ser Arg Gly Leu Asp Gly Ala		
625	630	635
Pro Leu		640

<210> 5773

<211> 579

<212> DNA

<213> Homo sapiens

<400> 5773

```

nnacgcgtga ggggcctgag gcgagcgggt agagcgtctc ccggaaggat gggccggtct
60
cggagccgga gctcgtccc ctccaagcac accaagagca gcaagcacia caagaagcgc
120
agccggtccc ggtcgcgatc ccgggacaag gagcgcgtgc ggaagcgttc caaatctcgg
180
gaaagtaaac ggaaccggcg gcgggagtcg cggtcccgtt cgcgtccac caacacggcc
240
gtgtcccggc gcgagcggga ccgggagcgc cctcgtcccc gcccgaccgc atcgacatct
300

```

tcgggcgcac ggtgagcaag cgcagcagcc tggacgagaa gcagaagcga gaggaggagg
 360
 agaagaaagc ggagttcgag cggcagcgaa aaattcgaca gcaagaaata gaagaaaaac
 420
 tcatcgagga agaaacagca cgaagagtag aagaattggt agcaanaaag ggtggaggaa
 480
 gaactggaga aaaggaagga tgaaattgaa cgagaagttc tccgaagggt ggaggaagcc
 540
 aaacgcacga tggaaaagca gttgctcgaa gaactcgag
 579

<210> 5774

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5774

Xaa	Arg	Val	Arg	Gly	Leu	Arg	Arg	Ala	Val	Arg	Ala	Ser	Pro	Gly	Arg
1				5				10					15		
Met	Gly	Arg	Ser	Arg	Ser	Arg	Ser	Ser	Ser	Arg	Ser	Lys	His	Thr	Lys
			20					25				30			
Ser	Ser	Lys	His	Asn	Lys	Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg
		35				40					45				
Asp	Lys	Glu	Arg	Val	Arg	Lys	Arg	Ser	Lys	Ser	Arg	Glu	Ser	Lys	Arg
	50					55				60					
Asn	Arg	Arg	Arg	Glu	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Thr	Asn	Thr	Ala
65				70				75						80	
Val	Ser	Arg	Arg	Glu	Arg	Asp	Arg	Glu	Arg	Pro	Arg	Pro	Arg	Pro	Thr
			85					90						95	
Ala	Ser	Thr	Ser	Ser	Gly	Ala	Arg								
			100												

<210> 5775

<211> 1441

<212> DNA

<213> Homo sapiens

<400> 5775

cgtcctcctc ccgctcggaa ggtcccaagg tgagacacct tcagcaggtc tcaggggaaga
 60
 tggcagccct aggggacatt caggagtccc cttctgtccc gtcccctgtc agtctctcat
 120
 caccggggac acctggaacc cagcaccacg agcctcagct tcacctccat gggcatcaac
 180
 atgcctaagg tgctctccca gccgtccgac ctggatctcc aagacgtaga ggaagtggag
 240
 atcggcagag acaccttctg gcccgactcc gagcccaagc cggagcaggc tccacgctct
 300
 cctggctctc agggccctga cgagggggcg ggcggggcg tgcgcacctc cgtgaggagc
 360
 cttccccgca gggcccgggtg cagcgccggc ttcgggcttg aatccagcgc ggagcggccg
 420
 gggggccagc cgctggggc cgtcccttgc gccagccgc gggggcgctg gcgcgtgacg
 480

ctcggtgcagc aagcagcggc cggggcccag ggtgcgccc agcgggctgc cgagctggga
 540
 gtcaacttcg gtcggagccg gcagggcagc gcgcggggga ccaagccgca caggtgagcag
 600
 gcctgcggca agagtttcaa gtataactcg ctgctcctga agcaccagcg catccacacg
 660
 ggcgagaagc cctacgcctg ccacgagtg gcgaagtgtt tcgccgcagc ttcgcgcttc
 720
 atccagcacc agcgcatcca cagcggcgag aagccctacg cctgccccga gtgcagcaag
 780
 accttcacgc gcagctccaa cctcatcaag caccaggtca tccacagcgg cgagcggccc
 840
 ttcgcctgcg gcgactgcgg caaactgttc cgccgcagct tcgcgctcct ggagcacgcg
 900
 cgcgtgcaca gcggcgagaa gccctacgag tgctccgact gcggcaagtg cttccgcggc
 960
 cgctcgact tcttcggca caaccgcaca cacacgggcg agaagcccta cactgcctc
 1020
 gactgcggca agagcttcag ccacagctcg cacctcatca agcaccagcg caccacacgt
 1080
 ggcggtgcgg cctacgcctg cccgttgtgt ggcaagagct tcagccggcg ctccaacctg
 1140
 caccggcacg agaagatcca caccacggg cccaaggccc tggccatgct gatgctgggg
 1200
 gcggcgcgcg cgggggctct ggccacaccc ccacccgctc ccacctagga ggccaggaaa
 1260
 gggggagcgg ggcgcccagg gccactggaa cagccccact ggagtcaagg ctccgagggg
 1320
 ggagagaggg gctcggaag ggagctgggg cggtgagggc atggggtgag gcatggcgat
 1380
 gggggagggc gagggcgaga aagggcaggc actctgcgaa ttaaaggcct tggacttgaa
 1440
 a
 1441

<210> 5776

<211> 359

<212> PRT

<213> Homo sapiens

<400> 5776

Met	Gly	Ile	Asn	Met	Pro	Lys	Val	Leu	Ser	Gln	Pro	Ser	Asp	Leu	Asp
1				5				10						15	
Leu	Gln	Asp	Val	Glu	Glu	Val	Glu	Ile	Gly	Arg	Asp	Thr	Phe	Trp	Pro
		20						25					30		
Asp	Ser	Glu	Pro	Lys	Pro	Glu	Gln	Ala	Pro	Arg	Ser	Pro	Gly	Ser	Gln
		35					40					45			
Ala	Pro	Asp	Glu	Gly	Ala	Gly	Gly	Ala	Leu	Arg	Thr	Ser	Val	Arg	Ser
	50				55						60				
Leu	Pro	Arg	Arg	Ala	Arg	Cys	Ser	Ala	Gly	Phe	Gly	Pro	Glu	Ser	Ser
65				70					75					80	
Ala	Glu	Arg	Pro	Ala	Gly	Gln	Pro	Pro	Gly	Ala	Val	Pro	Cys	Ala	Gln
			85					90					95		
Pro	Arg	Gly	Ala	Trp	Arg	Val	Thr	Leu	Val	Gln	Gln	Ala	Ala	Ala	Gly

```

      100      105      110
Pro Glu Gly Ala Pro Glu Arg Ala Ala Glu Leu Gly Val Asn Phe Gly
      115      120      125
Arg Ser Arg Gln Gly Ser Ala Arg Gly Thr Lys Pro His Arg Cys Glu
      130      135      140
Ala Cys Gly Lys Ser Phe Lys Tyr Asn Ser Leu Leu Lys His Gln
145      150      155      160
Arg Ile His Thr Gly Glu Lys Pro Tyr Ala Cys His Glu Cys Gly Lys
      165      170      175
Cys Phe Ala Ala Ala Ser Arg Phe Ile Gln His Gln Arg Ile His Ser
      180      185      190
Gly Glu Lys Pro Tyr Ala Cys Pro Glu Cys Ser Lys Thr Phe Thr Arg
      195      200      205
Ser Ser Asn Leu Ile Lys His Gln Val Ile His Ser Gly Glu Arg Pro
      210      215      220
Phe Ala Cys Gly Asp Cys Gly Lys Leu Phe Arg Arg Ser Phe Ala Leu
225      230      235      240
Leu Glu His Ala Arg Val His Ser Gly Glu Lys Pro Tyr Glu Cys Ser
      245      250      255
Asp Cys Gly Lys Cys Phe Arg Gly Arg Ser His Phe Phe Arg His Asn
      260      265      270
Arg Thr His Thr Gly Glu Lys Pro Tyr His Cys Leu Asp Cys Gly Lys
      275      280      285
Ser Phe Ser His Ser Ser His Leu Ile Lys His Gln Arg Thr His Arg
      290      295      300
Gly Val Arg Pro Tyr Ala Cys Pro Leu Cys Gly Lys Ser Phe Ser Arg
305      310      315      320
Arg Ser Asn Leu His Arg His Glu Lys Ile His Thr Thr Gly Pro Lys
      325      330      335
Ala Leu Ala Met Leu Met Leu Gly Ala Ala Ala Ala Gly Ala Leu Ala
      340      345      350
Thr Pro Pro Pro Ala Pro Thr
      355

```

<210> 5777

<211> 1431

<212> DNA

<213> Homo sapiens

<400> 5777

```

ggaaggctcg cctgggagct catacctggc tggggccgag gattggctgt tccggggcta
60
gggagcgctt tctcccgga accgcggctg tgacccaagt ggcccggacc agtttggggc
120
tgcgtgcggc ctgcctcaag caaccaggta cgtaggtcgg cggcccagct cggcgctgcg
180
gtgggagccg gagggcgaca gtcagagccg ggggtgccagc gggacgcgac cgccagatcc
240
acttaggacc ccgtcgttct gcgaagcggc cacgtctgag tcccggggcc tcctcgtgct
300
gcagatgtcg ccttaggacc tcggccagga taccctctgc catgctcttg tgctgcccg
360
gatcaccgac tggccttgt aagcaccttc gcagcaggaa gccagagct gcgcctgccc
420

```

tttctgaagg ctgtggaaga ggttggagtg ggcgcacatt agcttgcccc atccccattt
 480
 gaggtctgtc ggagctgccc ttcagtgtga gcatccacaa tgggtacccc agcctcgggtg
 540
 gtcagtgagc caccctcttg gcaggccccg attgaggccc ggggccgcaa gcaggcctcg
 600
 gccaacatct tccaggacgc cgagctgctg cagatccaag ccctgtttca acgcagcggg
 660
 gaccagctgg ccgaggaacg ggcacagatc atctgggaat gtgcagggga ccaccgtgtg
 720
 gctgaggccc tcaagaggct gcgcaggaag agggccccc aa ggcagaaacc ccctgggcca
 780
 ctgcgtacac cactgcagcc gcctcagaat cctggagccc cactctgcac tggccaaccc
 840
 acagagtgcc acagagacag cctccagtga gcagtatctg cactctagga agaaaagtgc
 900
 caggatccgc cggaactgga ggaagtcagg ccccaacaag tacctccacc agatcagaca
 960
 ctgatccagg gaaagagcca ggaatggcag tgtcttcctt cttgccaaaa ggcctgggga
 1020
 ggtgaaggaa gagagacttt aggcaagcag cccaaagggg taaatgaaag caagaggctg
 1080
 ctgccactga cctgctccat tcagaacaag actggatgct tctgttgagc tctccattat
 1140
 gtgggaccca ttcctcacca aaatgaggag agacagtgcac tgttcctgcc acagtccttc
 1200
 ccagtctaac actattcctg ggctgcatga tattcccctg ggagcaaagt gacaggcact
 1260
 tagatgcagc atttcaccac tcatgctact aatcatctac ctgctactac tgtaaaccat
 1320
 ggttcagca gcctgttcca cccccccaca ccatcaggat agcacaggga aactgtagtt
 1380
 taagtggcaa ataaaaacat ttgcatcaaa aaaaaaaaaa aaaaaaaaaa a
 1431

<210> 5778

<211> 164

<212> PRT

<213> Homo sapiens

<400> 5778

Met	Leu	Thr	Leu	Lys	Gly	Ser	Ser	Asp	Arg	Pro	Gln	Met	Gly	Met	Gly
1				5					10					15	
Gln	Ala	Lys	Met	Arg	Pro	Leu	Gln	Pro	Leu	Pro	Gln	Pro	Ser	Glu	Arg
			20					25					30		
Ala	Gly	Ala	Ala	Leu	Gly	Phe	Leu	Leu	Arg	Arg	Cys	Leu	Gln	Gly	Pro
			35				40					45			
Val	Gly	Asp	His	Gly	Gln	His	Lys	Ser	Met	Ala	Glu	Gly	Ile	Leu	Ala
	50				55						60				
Glu	Val	Leu	Arg	Arg	His	Leu	Gln	His	Glu	Glu	Ala	Pro	Gly	Leu	Arg
65					70					75				80	
Arg	Gly	Arg	Phe	Ala	Glu	Arg	Arg	Gly	Pro	Lys	Trp	Ile	Trp	Arg	Ser
			85						90					95	
Arg	Pro	Ala	Gly	Thr	Pro	Ala	Leu	Thr	Val	Ala	Leu	Arg	Leu	Pro	Pro

```

          100          105          110
Gln Arg Arg Ala Gly Pro Pro Thr Tyr Val Pro Gly Cys Leu Arg Gln
          115          120          125
Ala Ala Arg Ser Pro Lys Leu Val Arg Ala Thr Trp Val Thr Ala Ala
          130          135          140
Val Pro Gly Arg Lys Arg Ser Leu Ala Pro Glu Gln Pro Ile Leu Gly
          145          150          155          160
Pro Ser Gln Val

```

<210> 5779

<211> 371

<212> DNA

<213> Homo sapiens

<400> 5779

```

ctcttgagac gtgtggaggg aaggaagggg agaacccatg atctacccca gaggcattgga
60
cgggagagag ggggtgatttc agccttgctc ggcattccctt gtgtctgcnt gaggggtgtgt
120
gcacacggga atgtgtgcgg gtgtgtgtgc gtgcatgcag ctgtgtgtgg atgtgcantc
180
gtgtgtgggt gtgtaggtgt gtgtgggtgt gtgcaccagt gcaggtgtgc atgggtgtgt
240
acaggtgggt gtgtgtatgt gtgtgggggt gtgcccattc gtgcaggtgt gtgggtgtgc
300
aggggtcncat gcctgtgtgt ggggtgtgncc ccgtgtgtac ccctgtggag gtgtgtgggt
360
gtgtgcagtg t
371

```

<210> 5780

<211> 123

<212> PRT

<213> Homo sapiens

<400> 5780

```

Leu Leu Arg Arg Val Glu Gly Arg Lys Gly Arg Thr His Asp Leu Pro
1      5      10      15
Gln Arg His Gly Arg Glu Arg Gly Val Ile Ser Ala Leu Ser Gly Ile
20     25     30
Pro Cys Val Cys Xaa Arg Val Cys Ala His Gly Asn Val Cys Gly Cys
35     40     45
Val Cys Val His Ala Ala Val Cys Gly Cys Ala Xaa Val Cys Gly Cys
50     55     60
Val Gly Val Cys Gly Cys Val His Gln Cys Arg Cys Ala Trp Val Cys
65     70     75     80
Thr Gly Gly Cys Val Tyr Val Cys Gly Gly Val Pro Ile Cys Ala Gly
85     90     95
Val Trp Val Cys Arg Val Xaa Cys Leu Cys Val Gly Val Xaa Pro Cys
100    105    110
Val Pro Leu Trp Arg Cys Val Gly Val Cys Ser
115    120

```

<210> 5781
 <211> 845
 <212> DNA
 <213> Homo sapiens

<400> 5781
 ggggttccgt gccccaaaat cgaggagacc gtgggcttgg ggtccggatc ggggccgcgg
 60
 ggcgctggcg tgcggtgtca tttctgcggt gtaaatgtc ccaccttggc cgatttcaag
 120
 ccaccaggtg aggatggcac tgcaacatct tccactgagg ctccagctgc cctctcaggt
 180
 acatcagggc ctggancgtc ctctctcca ggagggccag gactcggccc cctgccagcc
 240
 cccgaagcat tgcagccagg agtgcagcgt gggggccctg caggccatgg ccaggcccca
 300
 gcgccaccag caccaggtca ggctggaagc cataggccag gggcagcacc aagcccaaga
 360
 tgcagctcag gaaaccaccg gtcactactg gcagtggcgt ggagacatgg aacatggata
 420
 gggcagccgc ctcttgccc ctgatgttca gccacagact cctcccgtca tgggcgaggt
 480
 ctggaggccg gtccagctgt cccagggccca cgcacagcag cctggaagaa gagctggcct
 540
 caggacaggt gttcatgttg tccagagtcc attcccagaa ctctctgtgc ttggccagcc
 600
 aggatagggg tgcccacagg tcctgccgtc agaggctcag gatggccaag tgaggcttac
 660
 ctctgggctc cgtgggacag gcctctccga acagccacat ccagggtggc tgctgcagca
 720
 gaggtggag tggctgctat accactgttc acctgtggga tgaataaaca gtggagaatg
 780
 aggcaccaac caactcccaa gccaggtaaa cagatccaca gttcccttca ttcggtgtgt
 840
 ctctg
 845

<210> 5782
 <211> 147
 <212> PRT
 <213> Homo sapiens

<400> 5782
 Gly Val Pro Cys Pro Lys Ile Glu Gly Ala Val Gly Leu Gly Ser Gly
 1 5 10 15
 Ser Arg Pro Arg Gly Ala Gly Val Arg Cys His Phe Cys Gly Val Asn
 20 25 30
 Ala Pro Thr Leu Ala Asp Phe Lys Pro Pro Gly Glu Asp Gly Thr Ala
 35 40 45
 Thr Ser Ser Thr Glu Ala Pro Ala Ala Leu Ser Gly Thr Ser Gly Pro
 50 55 60
 Gly Xaa Ser Ser Pro Pro Gly Gly Pro Gly Leu Gly Pro Leu Pro Ala
 65 70 75 80
 Pro Glu Ala Leu Gln Pro Gly Val Gln Arg Gly Gly Pro Ala Gly His

```

<400> 5783
gtgggagcgg .ccatggaccg cttcgttttg accagcggcc tcctggagat caacgagacc
60
ctggtgatcc agcagcgcg ggtgcgaatc tacgatggcg aggagaagat aaaatttgat
120
gctgggactc tccttcttag tacacaccga ctgatttggg gagatcagaa aaatcatgag
180
tgttgcatgg ccattctcct ttcccaaatt gtgttcattg aagaacaggc ggctggaatt
240
gggaagagtg ccaaaatagt ggttcattct caccagctc ctctaacaa agaacctggc
300
ccattccaga gtagtaagaa ctctacatc aaactctcct tcaaagaaca tggccagatt
360
gagttttaca ggcgtttatc agaggaaatg acacaaagaa gatgggagaa tatgccagtt
420
tcccagtcac tacaaacaaa tagaggaccc cagccaggaa gaataagggc tgtaggaatt
480
gtagggtattg aaaggaaact ggaagaaaaa agaaaagaaa ctgacaaaaa catttctgag
540
gcctttgaag acctcagcaa actaatgatc aaggctaagg aaatgggtgga attatcaaaa
600
tcaattgcta ataaaattaa agacaaacaa ggtgacatca cagaagatga gaccatcagg
660
tttaaatcct acttgetgag catgggaata gctaaccag ttaccagaga aacctacggc
720
tcaggcacac agtaccacat gcagctggcc aaacaactgg ctggaatatt gcagggtgct
780
ttagaggaac gagggggaat aatgtcactc acggaggtgt actgcttagt aaaccgagct
840
cgaggaatgg aattgctctc accagaagat ttagtgaatg cgtgcaagat gctggaagca
900
ctgaaattac ctctcaggct ccgtgtgttt gacagtggcg tcatggtaat tgagcttcag
960
tctcacaagg aagaggaaat ggtggcctcg gccctggaga cagtttcaga aaagggatcc
1020
ctaacatcag aagagtttgc taagcttgtg ggaatgtctg tcctcctagc caaagaaagg
1080
ttgctgcttg cagagaagat gggccatctt tgccgtgatg actcagtgga aggcctgcgt
1140

```

ttttacccaa atttatttat gacacagagc taagggtttt gtattttaaaa tcctttttgt
 1200
 ccatatgctt gcgtcatgta gaggttgat gacattgagc taagagataa accccgatca
 1260
 attgagaatt tattggaact tcacagtgca atgtaaatct cttttaattt ctecccaaat
 1320
 atggtccagg aaatttattt agtatacgca taggaaaatt cagaaaagtg aatgccaata
 1380
 tgaatttaaa atcatgctat agtgcagaac cctcagagtt taacttggaa tatagtggat
 1440
 ttttaactga tcctcaaact taatcatttt ataaagaagg gaatttagtt ttgcagagaa
 1500
 taaaaagaga agttgcatgt tcagacaggt tagattatta ttttggtgta actgaaattc
 1560
 actgattgca catgacaatg ttgggacaaa atatactgca gcatgctata tgaggctcct
 1620
 cccagggct tttagaagca gtcatagaca tgtcttcaac ataccataa aaataccttt
 1680
 aaaaatgaaa taattttatt tgacacatta tttatatata ttctatctag gtttctcttt
 1740
 gtttttttta aagtgatgat ttcattgact gggcatttaa aagaaatggc aactgtggtc
 1800
 catttttggg ttttccaaat gctgtggaat ttttgaaa
 1839

<210> 5784

<211> 386

<212> PRT

<213> Homo sapiens

<400> 5784

Met	Asp	Arg	Phe	Val	Trp	Thr	Ser	Gly	Leu	Leu	Glu	Ile	Asn	Glu	Thr
1				5					10					15	
Leu	Val	Ile	Gln	Gln	Arg	Gly	Val	Arg	Ile	Tyr	Asp	Gly	Glu	Glu	Lys
			20					25					30		
Ile	Lys	Phe	Asp	Ala	Gly	Thr	Leu	Leu	Leu	Ser	Thr	His	Arg	Leu	Ile
		35				40						45			
Trp	Arg	Asp	Gln	Lys	Asn	His	Glu	Cys	Cys	Met	Ala	Ile	Leu	Leu	Ser
	50				55						60				
Gln	Ile	Val	Phe	Ile	Glu	Gln	Ala	Ala	Gly	Ile	Gly	Lys	Ser	Ala	
65				70					75					80	
Lys	Ile	Val	Val	His	Leu	His	Pro	Ala	Pro	Pro	Asn	Lys	Glu	Pro	Gly
			85					90					95		
Pro	Phe	Gln	Ser	Ser	Lys	Asn	Ser	Tyr	Ile	Lys	Leu	Ser	Phe	Lys	Glu
		100						105					110		
His	Gly	Gln	Ile	Glu	Phe	Tyr	Arg	Arg	Leu	Ser	Glu	Glu	Met	Thr	Gln
	115					120					125				
Arg	Arg	Trp	Glu	Asn	Met	Pro	Val	Ser	Gln	Ser	Leu	Gln	Thr	Asn	Arg
	130				135						140				
Gly	Pro	Gln	Pro	Gly	Arg	Ile	Arg	Ala	Val	Gly	Ile	Val	Gly	Ile	Glu
145				150					155					160	
Arg	Lys	Leu	Glu	Glu	Lys	Arg	Lys	Glu	Thr	Asp	Lys	Asn	Ile	Ser	Glu
			165					170					175		
Ala	Phe	Glu	Asp	Leu	Ser	Lys	Leu	Met	Ile	Lys	Ala	Lys	Glu	Met	Val

[illegible]

<210> 5785

<211> 785

<212> DNA

<213> Homo sapiens

<400> 5785

60	tttttttttt	ttttgacagt	ttctccactt	tattagcctg	gagctcctcc	ctgccagccc
120	caggggctgg	tcgctgggtc	ctgggcacag	tgagcagggc	tgaggtcaga	cgggttcggc
180	ccttggccat	ggcagcttgg	ttgggacagc	cgggccaaagg	gaaaaaaagg	tgcaaaagtc
240	caaatgctgg	cacttcaggt	gtggccggca	cccagccagg	cgcagtgggt	gggcagggcg
300	ccatgcttct	ctcctggcga	caggtcggcc	gtgtagcagc	gccccctccc	agcagccact
360	aggaacagct	ggtgattctc	gccaggaact	gctgcgcca	ccactcgtct	aggtcaatgg
420	gcacaaagtt	ctgcagccgg	ggattggggg	tcctctccac	gtactgcaca	ggccttggcc
480	cgccctcacc	ggctggggcca	ccatccagct	gctgttgcac	ctgctgccag	gcttcggaca
540	caaagcggac	attctccttg	tgggccagtg	tgtaggtctc	ctgggtcccc	tggagggatg
600	gggacttggg	ggggtcccgc	cggcgattca	cacgattgaa	cacaagcctt	ggccctgcac

tcgacagggg ccaggggtccc agcgggtgcg cgagagctgc gcccgctggg gctgcaaggt
 660
 cggcgggcgc ggctgccggc ttttcaggag ctcttgagagc tggcccttca cctgctgctg
 720
 cgtgagacct gtgcgggtgc gcgaccaatt tgctggggccc gttgatgatg gtgtacatgg
 780
 cgcgc
 785

<210> 5786

<211> 159

<212> PRT

<213> Homo sapiens

<400> 5786

Met Tyr Thr Ile Ile Asn Gly Pro Ser Lys Leu Val Ala Gln Pro His
 1 5 10 15
 Arg Ser His Ala Ala Ala Gly Glu Gly Pro Ala Pro Gly Ala Pro Glu
 20 25 30
 Lys Pro Ala Ala Arg Ala Ala Asp Leu Ala Ala Pro Ala Gly Ala Ala
 35 40 45
 Leu Ala Gln Pro Leu Gly Pro Trp Pro Leu Ser Ser Ala Gly Pro Arg
 50 55 60
 Leu Val Phe Asn Arg Val Asn Arg Arg Arg Asp Pro Ser Lys Ser Pro
 65 70 75 80
 Ser Leu Gln Gly Thr Gln Glu Thr Tyr Thr Leu Ala His Lys Glu Asn
 85 90 95
 Val Arg Phe Val Ser Glu Ala Trp Gln Gln Val Gln Gln Gln Leu Asp
 100 105 110
 Gly Gly Pro Ala Gly Glu Gly Gly Pro Arg Pro Val Gln Tyr Val Glu
 115 120 125
 Arg Thr Pro Asn Pro Arg Leu Gln Asn Phe Val Pro Ile Asp Leu Asp
 130 135 140
 Glu Trp Trp Ala Gln Gln Phe Leu Ala Arg Ile Thr Ser Cys Ser
 145 150 155

<210> 5787

<211> 1683

<212> DNA

<213> Homo sapiens

<400> 5787

nnngctccag tccagtcgtg cagnggngng ntctttcctc cgctcaagtc caggaacggt
 60
 tccccgggtc ccaccgtctc ggnangccca cngcctggg ccaaagtccg cgaacggaag
 120
 ccngggcgag gaggattctg ggagttggag gccgaggctg cgaccngcag gcgcaaacct
 180
 gcccttgggg tgagggctgt aagtggcgcg attcgcgga gcgccccgat ggaacctcct
 240
 ggtcctgtga gggggccctt gcaagattcc agctggtatg agccttctgc agagctagtg
 300
 cagactagga tggctgtatc actaacagca gctgaaactc tggcccttca gggtagacag
 360

ggacaagaga agatgatgat gatgggacca aaggaagagg aacagtcttg tgagtatgag
 420
 accaggctac ctgggaacca ctctaccagt caagagatct tccgccaacg cttcaggcat
 480
 ctccgctacc aggagactcc tgggtccccg gaggccttga gccaaactacg agtactctgc
 540
 tgtgagtggc tgaggccaga gaaacacacg aaggagcaga tcttgaggtt cctgggtgctg
 600
 gaacaattct tgaccatcct gcctgaggag ctccaatcct ggggtgcggg acatcacctt
 660
 aagagtggag aggaggctgt gactgtgctg gaggatttag agaaaggact tgaaccagag
 720
 ccgcaggtcc caggccctgc acatggacct gcacaggaag agccatggga gaagaaggaa
 780
 tctctgggag cagcccagga agcactgagc atccagctcc agcctaagga gacccagcct
 840
 ttcccaaaga gtgaacaggt atatttacat tttctgtcag ttgttacaga agatggccca
 900
 gagcccaagg acaaaggatc attgccacaa ccaccatta ctgaagtgga atcacagggtg
 960
 ttctcagaaa aacttgctac tgacacctct acatttgaag ctacctctga gggtagctta
 1020
 gaactgcagc agagaaatcc caaagcggag agactgaggt ggtcccctgc ccaggaggaa
 1080
 agtttcaggc agatggttgt catccataag gaaattccca caggggaagaa agaccatgaa
 1140
 tgtagtgaat gtggtaaaac cttcatttat aactcacatc ttgttgtcca ccagagagtt
 1200
 cattctggag agaaacccta taagtgtagt gactgtggga aaactttcaa acagagctca
 1260
 aacctcggtc agcatcagag aattcataca ggagagaaac ctttcgaatg taatgaatgt
 1320
 gggaaggcct tcagatgggg tgctcatctt gttcagcatc agaggattca ctcaggagag
 1380
 aagccctatg agtgtaatga gtgtgggaag gccttttagtc aaagctcata tctaagtcag
 1440
 catcggagaa ttcacagtgg agagaaacct tttatatgta aagaatgtgg gaaagcttat
 1500
 ggatggtgct cagagctcat tagacatcgg agagtcatg ccagaaaaga gccttcccat
 1560
 tgaattgaag gggagaacgt ctccagacag aattctacat cgggtctaata tacttttagga
 1620
 ctggatccca taaaagttat aagttcctta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1680
 aaa
 1683

<210> 5788

<211> 417

<212> PRT

<213> Homo sapiens

<400> 5788

Met Ala Val Ser Leu Thr Ala Ala Glu Thr Leu Ala Leu Gln Gly Thr

1	5	10	15
Gln Gly Gln Glu Lys Met Met Met Met Gly Pro Lys Glu Glu Glu Gln			
	20	25	30
Ser Cys Glu Tyr Glu Thr Arg Leu Pro Gly Asn His Ser Thr Ser Gln			
	35	40	45
Glu Ile Phe Arg Gln Arg Phe Arg His Leu Arg Tyr Gln Glu Thr Pro			
	50	55	60
Gly Pro Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp			
65	70	75	80
Leu Arg Pro Glu Lys His Thr Lys Glu Gln Ile Leu Glu Phe Leu Val			
	85	90	95
Leu Glu Gln Phe Leu Thr Ile Leu Pro Glu Glu Leu Gln Ser Trp Val			
	100	105	110
Arg Gly His His Pro Lys Ser Gly Glu Glu Ala Val Thr Val Leu Glu			
	115	120	125
Asp Leu Glu Lys Gly Leu Glu Pro Glu Pro Gln Val Pro Gly Pro Ala			
	130	135	140
His Gly Pro Ala Gln Glu Glu Pro Trp Glu Lys Lys Glu Ser Leu Gly			
145	150	155	160
Ala Ala Gln Glu Ala Leu Ser Ile Gln Leu Gln Pro Lys Glu Thr Gln			
	165	170	175
Pro Phe Pro Lys Ser Glu Gln Val Tyr Leu His Phe Leu Ser Val Val			
	180	185	190
Thr Glu Asp Gly Pro Glu Pro Lys Asp Lys Gly Ser Leu Pro Gln Pro			
	195	200	205
Pro Ile Thr Glu Val Glu Ser Gln Val Phe Ser Glu Lys Leu Ala Thr			
	210	215	220
Asp Thr Ser Thr Phe Glu Ala Thr Ser Glu Gly Thr Leu Glu Leu Gln			
225	230	235	240
Gln Arg Asn Pro Lys Ala Glu Arg Leu Arg Trp Ser Pro Ala Gln Glu			
	245	250	255
Glu Ser Phe Arg Gln Met Val Val Ile His Lys Glu Ile Pro Thr Gly			
	260	265	270
Lys Lys Asp His Glu Cys Ser Glu Cys Gly Lys Thr Phe Ile Tyr Asn			
	275	280	285
Ser His Leu Val Val His Gln Arg Val His Ser Gly Glu Lys Pro Tyr			
	290	295	300
Lys Cys Ser Asp Cys Gly Lys Thr Phe Lys Gln Ser Ser Asn Leu Gly			
305	310	315	320
Gln His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Glu Cys Asn Glu			
	325	330	335
Cys Gly Lys Ala Phe Arg Trp Gly Ala His Leu Val Gln His Gln Arg			
	340	345	350
Ile His Ser Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys Ala			
	355	360	365
Phe Ser Gln Ser Ser Tyr Leu Ser Gln His Arg Arg Ile His Ser Gly			
	370	375	380
Glu Lys Pro Phe Ile Cys Lys Glu Cys Gly Lys Ala Tyr Gly Trp Cys			
385	390	395	400
Ser Glu Leu Ile Arg His Arg Arg Val His Ala Arg Lys Glu Pro Ser			
	405	410	415
His			

<210> 5789
<211> 1201
<212> DNA
<213> Homo sapiens

<400> 5789
nngcggccgc agcctgagcc agggccccct ccctcgtcag gaccggggca gcaagcaggc
60
cgggggcagg tccgggcacc caccatgcga ggcgagctct ggctcctggt gctggtgctc
120
agggaggtcg cccgggcgct gagccccag cccggagcag gtcacgatga gggcccaggg
180
tctggatggg ctgccaaagg gaccgtgcgg ggctggaacc ggagagcccg agagagccct
240
gggcatgtgt cagagccgga caggaccag ctgagccagg acctgggtgg gggcaccctg
300
gccatggaca cgctgccaga taacaggacc aggggtggtgg aggacaacca cagctattat
360
gtgtcccgtc tctatggccc cagcgagccc cacagccggg aactgtgggt agatgtggcc
420
gaggccaacc ggagccaagt gaagatccac acaatactct ccaacacca cgggcaggct
480
tcgagagtgg tcttgtcctt tgatttcctt ttctacgggc atcctctgcg gcagatcacc
540
atagcaactg gaggttcat cttcatgggg gacgtgatcc atcggtgct cacagctact
600
cagtatgtgg cggccctgat ggccaacttc aaccctggct actccgacaa ctccacagtt
660
gtttactttg acaatgggac agtctttgtg gttcagtggg accacgttta tctccaaggc
720
tggaagaca agggcagttt caccttcag gcagctctgc accatgacgg ccgcattgtc
780
tttgcctata aagagatccc tatgtctgtc cgggaaatca gtcctccca gcatcctgtc
840
aaaaccggcc tatcggtatg cttcatgatt ctcaatccat ccccggtatg gccagaatct
900
cggcgaagga gcatctttga ataccaccgc atagagctgg accccagcaa ggtcaccagc
960
atgtcgggcg tggagtccac ccattgccg acctgcctgc agcataggag ctgtgacgcc
1020
tgcattgtcct cagacctgac cttcaactgc agctgggtgcc atgtcctcca gagatgctcc
1080
agtggctttg accgctatcg ccaggagtgg atggactatg gctgtgcaca ggaggcagag
1140
ggcaggatgt gcgaggactt ccaggatgag gaccacgact cagcctcccc tgacactttc
1200
t
1201

<210> 5790
<211> 400
<212> PRT
<213> Homo sapiens

<400> 5790

Xaa Arg Pro Gln Pro Glu Pro Gly Pro Pro Pro Ser Ser Gly Pro Gly
 1 5 10 15
 Gln Gln Ala Gly Arg Gly Gln Val Arg Ala Pro Thr Met Arg Gly Glu
 20 25 30
 Leu Trp Leu Leu Val Leu Val Leu Arg Glu Ala Ala Arg Ala Leu Ser
 35 40 45
 Pro Gln Pro Gly Ala Gly His Asp Glu Gly Pro Gly Ser Gly Trp Ala
 50 55 60
 Ala Lys Gly Thr Val Arg Gly Trp Asn Arg Arg Ala Arg Glu Ser Pro
 65 70 75 80
 Gly His Val Ser Glu Pro Asp Arg Thr Gln Leu Ser Gln Asp Leu Gly
 85 90 95
 Gly Gly Thr Leu Ala Met Asp Thr Leu Pro Asp Asn Arg Thr Arg Val
 100 105 110
 Val Glu Asp Asn His Ser Tyr Tyr Val Ser Arg Leu Tyr Gly Pro Ser
 115 120 125
 Glu Pro His Ser Arg Glu Leu Trp Val Asp Val Ala Glu Ala Asn Arg
 130 135 140
 Ser Gln Val Lys Ile His Thr Ile Leu Ser Asn Thr His Arg Gln Ala
 145 150 155 160
 Ser Arg Val Val Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Pro Leu
 165 170 175
 Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile Phe Met Gly Asp Val
 180 185 190
 Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala Pro Leu Met Ala
 195 200 205
 Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr Val Val Tyr Phe Asp
 210 215 220
 Asn Gly Thr Val Phe Val Val Gln Trp Asp His Val Tyr Leu Gln Gly
 225 230 235 240
 Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala Leu His His Asp
 245 250 255
 Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met Ser Val Pro Glu
 260 265 270
 Ile Ser Ser Ser Gln His Pro Val Lys Thr Gly Leu Ser Asp Ala Phe
 275 280 285
 Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser Arg Arg Arg Ser
 290 295 300
 Ile Phe Glu Tyr His Arg Ile Glu Leu Asp Pro Ser Lys Val Thr Ser
 305 310 315 320
 Met Ser Ala Val Glu Phe Thr Pro Leu Pro Thr Cys Leu Gln His Arg
 325 330 335
 Ser Cys Asp Ala Cys Met Ser Ser Asp Leu Thr Phe Asn Cys Ser Trp
 340 345 350
 Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe Asp Arg Tyr Arg Gln
 355 360 365
 Glu Trp Met Asp Tyr Gly Cys Ala Gln Glu Ala Glu Gly Arg Met Cys
 370 375 380
 Glu Asp Phe Gln Asp Glu Asp His Asp Ser Ala Ser Pro Asp Thr Phe
 385 390 395 400

<210> 5791

<211> 3285

<212> DNA

<213> Homo sapiens

<400> 5791

ntgtacattg tataaactga gtagcattga actgcatttt agaagtatgt catcagaaac
60
aaatcacatt atggaaagga tatacaaatg ccaagtata tgactctttt ggcatggttg
120
tagcatgggc cattcagctt tcagaatctt tcggaggctc tagtttggtg cctagtacta
180
gttatttttg ttagaacaat ctctcaaat ttagataatt ttccagttgt atgtctgtca
240
cttttaactc taaagcgtaa gaatcatggt aacctctcc tcccccgcc gtccccgcg
300
ctccatctc cgcccgcc cgagcagctg cggggccgc accgcccgc cgcctgtgc
360
aggctgagtc atcactagag agtgggaagg gcagcagcag cagagaatcc aaaccctaa
420
gctgatatca caaagtacca tttctccaag ttgggggctc agaggggagt catcatgagc
480
gatgttacca ttgtgaaaga aggttgggtt cagaagaggg gagaatatat aaaaaactg
540
aggccaagat acttcctttt gaagacagat ggctcattca taggatataa agagaaacct
600
caagatgttg atttaccta tcccctcaac aacttttcag tggcaaatg ccagttaatg
660
aaaacagaac gaccaaagcc aaacacattt ataatcagat gtctccagtg gactactgtt
720
atagagagaa catttcatgt agatactcca gaggaaggag aagaatggac agaagctatc
780
caggctgtag cagacagact gcagaggcaa gaagaggaga gaatgaattg tagtccaact
840
tcacaaattg ataatatagg agaggaagag atggatgcct ctacaacca tcataaaaga
900
aagacaatga atgattttga ctatttgaaa ctactaggta aaggcacttt tgggaaagt
960
attttggttc gagagaaggc aagtggaaaa tactatgcta tgaagattct gaagaaagaa
1020
gtcattattg caaaggatga agtggcacac actctaactg aaagcagagt attaaagaac
1080
actagacatc cttttttaac atccttgaaa tattccttcc agacaaaaga ccgtttgtgt
1140
tttgtgatgg aatatgttaa tgggggagag ctgttttcc atttgtcgag agagcgggtg
1200
ttctctgagg accgcacacg tttctatggt gcagaaattg tctctgcctt ggactatcta
1260
cattccggaa agattgtgta ccgtgatctc aagttggaga atctaattgct ggacaaagat
1320
ggccacataa aaattacaga ttttggactt tgcaaagaag ggatcacaga tgcagccacc
1380
atgaagacat cctgtggcac tccagaatat ctggcaccag aggtgttaga agataatgac
1440
tatggccgag cagtagactg gtggggccta ggggttgtca tgtatgaaat gatgtgtggg
1500

aggttacctt tctacaacca ggaccatgag aaactttttg aattaatatt aatggaagac
1560
attaaatttc ctogaacact ctcttcagat gcaaaatcat tgctttcagg gctcttgata
1620
aaggatccaa ataaacgcct tggtaggagga ccagatgatg caaaagaaat tatgagacac
1680
agtttcttct ctggagtaaa ctggcaagat gtatatgata aaaagcttgt acctcctttt
1740
aaacctcaag taacatctga gacagatact agatattttg atgaagaatt tacagctcag
1800
actattacaa taacaccacc tgaaaaatat gatgaggatg gtatggactg catggacaat
1860
gagaggcggc cgcatttccc tcaattttcc tactctgcaa gtggacgaga ataagtctct
1920
ttcattctgc tacttcactg tcatcttcaa tttattactg aaaatgattc ctggacatca
1980
ccagtccctag ctcttacaca tagcaggggc acctccgac atcccagacc agccaagggt
2040
cttcacccct cgccaccttt caccctcatg aaaacacaca tacacgcaa tacactccag
2100
ttttgtttt tgcataaat tgtatctcag tctaagggtct catgctgttg ctgctactgt
2160
cttactatta tagcaacttt aagaagtaat tttccaacct ttggaagtca tgagcccacc
2220
attgttcatt tgtgcaccaa ttatcatctt ttgatctttt agtttttccc tcagtgaagg
2280
ctaaatgaga tacactgatt ctaggtacat tttttaactt tctagaagag aaaaactaac
2340
tagactaaga agatttagtt tataaattca gaacaagcaa ttgtggaagg gtggtggcgt
2400
gcatatgtaa agcacatcag atccgtgcgt gaagtaggca tatatcacta agctgtggct
2460
ggaattgatt aggaagcatt tggtagaagg actgaacaac tgttgggata tatatatata
2520
tatataattt ttttttttta aattcctggt ggatactgta gaagaagccc atatcacatg
2580
tggatgtcga gacttcacgg gcaatcatga gcaagtgaac actgttctac caagaactga
2640
aggcatatgc acagtcaagg tcacttaaag ggtcttatga aacaatttga gccagagagc
2700
atctttcccc tgtgcttgga aacctttttt ccttcttgac atttatcacc tctgatggct
2760
gaagaatgta gacaggtata atgatactgc ttttcaccaa aatttctaca ccaaggtaaa
2820
cagggtgttg ccttatttaa ttttttactt tcagttctac gtgaattagc tttttctcag
2880
atgttgaaac tttgaatgtc cttttatgat tttgtttata ttgcagtagt atttattttt
2940
tagtgatgag aattgtatgt catgttagca aacgcagctc caacttatat aaaatagact
3000
tactgcagtt acttttgacc catgtgcaag gattgtacac gttgatgaga atcatgcact
3060
ttttctctc tgtaaaaaa aatgataagg ctctgaaatg gaatatattg gttagaattt
3120

ggctttggga gaagagatgc tgccatttaa ccccttggtgta ctgaaaatga gaaaatcccc
 3180
 aactatgcat gccaaaggggt taatgaaaca aatagctgtt gacgtttgct catttaagaa
 3240
 tttgaaacgt tatgatgacc tggcaacaaa aaaaaaaaaa aaaaa
 3285

<210> 5792

<211> 479

<212> PRT

<213> Homo sapiens

<400> 5792

Met	Ser	Asp	Val	Thr	Ile	Val	Lys	Glu	Gly	Trp	Val	Gln	Lys	Arg	Gly
1				5					10					15	
Glu	Tyr	Ile	Lys	Asn	Trp	Arg	Pro	Arg	Tyr	Phe	Leu	Leu	Lys	Thr	Asp
			20					25					30		
Gly	Ser	Phe	Ile	Gly	Tyr	Lys	Glu	Lys	Pro	Gln	Asp	Val	Asp	Leu	Pro
		35					40				45				
Tyr	Pro	Leu	Asn	Asn	Phe	Ser	Val	Ala	Lys	Cys	Gln	Leu	Met	Lys	Thr
	50					55					60				
Glu	Arg	Pro	Lys	Pro	Asn	Thr	Phe	Ile	Ile	Arg	Cys	Leu	Gln	Trp	Thr
65					70					75				80	
Thr	Val	Ile	Glu	Arg	Thr	Phe	His	Val	Asp	Thr	Pro	Glu	Glu	Arg	Glu
				85					90					95	
Glu	Trp	Thr	Glu	Ala	Ile	Gln	Ala	Val	Ala	Asp	Arg	Leu	Gln	Arg	Gln
			100					105					110		
Glu	Glu	Glu	Arg	Met	Asn	Cys	Ser	Pro	Thr	Ser	Gln	Ile	Asp	Asn	Ile
		115					120					125			
Gly	Glu	Glu	Glu	Met	Asp	Ala	Ser	Thr	Thr	His	His	Lys	Arg	Lys	Thr
		130				135					140				
Met	Asn	Asp	Phe	Asp	Tyr	Leu	Lys	Leu	Leu	Gly	Lys	Gly	Thr	Phe	Gly
145					150					155				160	
Lys	Val	Ile	Leu	Val	Arg	Glu	Lys	Ala	Ser	Gly	Lys	Tyr	Tyr	Ala	Met
				165					170					175	
Lys	Ile	Leu	Lys	Lys	Glu	Val	Ile	Ile	Ala	Lys	Asp	Glu	Val	Ala	His
			180					185					190		
Thr	Leu	Thr	Glu	Ser	Arg	Val	Leu	Lys	Asn	Thr	Arg	His	Pro	Phe	Leu
	195						200					205			
Thr	Ser	Leu	Lys	Tyr	Ser	Phe	Gln	Thr	Lys	Asp	Arg	Leu	Cys	Phe	Val
	210					215					220				
Met	Glu	Tyr	Val	Asn	Gly	Gly	Glu	Leu	Phe	Phe	His	Leu	Ser	Arg	Glu
225					230					235				240	
Arg	Val	Phe	Ser	Glu	Asp	Arg	Thr	Arg	Phe	Tyr	Gly	Ala	Glu	Ile	Val
				245					250					255	
Ser	Ala	Leu	Asp	Tyr	Leu	His	Ser	Gly	Lys	Ile	Val	Tyr	Arg	Asp	Leu
		260						265					270		
Lys	Leu	Glu	Asn	Leu	Met	Leu	Asp	Lys	Asp	Gly	His	Ile	Lys	Ile	Thr
		275					280					285			
Asp	Phe	Gly	Leu	Cys	Lys	Glu	Gly	Ile	Thr	Asp	Ala	Ala	Thr	Met	Lys
	290					295					300				
Thr	Ser	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	Ala	Pro	Glu	Val	Leu	Glu	Asp
305					310					315				320	
Asn	Asp	Tyr	Gly	Arg	Ala	Val	Asp	Trp	Trp	Gly	Leu	Gly	Val	Val	Met

325									330				335			
Tyr	Glu	Met	Met	Cys	Gly	Arg	Leu	Pro	Phe	Tyr	Asn	Gln	Asp	His	Glu	
340									345				350			
Lys	Leu	Phe	Glu	Leu	Ile	Leu	Met	Glu	Asp	Ile	Lys	Phe	Pro	Arg	Thr	
355									360				365			
Leu	Ser	Ser	Asp	Ala	Lys	Ser	Leu	Leu	Ser	Gly	Leu	Leu	Ile	Lys	Asp	
370									375				380			
Pro	Asn	Lys	Arg	Leu	Gly	Gly	Gly	Pro	Asp	Asp	Ala	Lys	Glu	Ile	Met	
385									390				395			
Arg	His	Ser	Phe	Phe	Ser	Gly	Val	Asn	Trp	Gln	Asp	Val	Tyr	Asp	Lys	
405									410				415			
Lys	Leu	Val	Pro	Pro	Phe	Lys	Pro	Gln	Val	Thr	Ser	Glu	Thr	Asp	Thr	
420									425				430			
Arg	Tyr	Phe	Asp	Glu	Glu	Phe	Thr	Ala	Gln	Thr	Ile	Thr	Ile	Thr	Pro	
435									440				445			
Pro	Glu	Lys	Tyr	Asp	Glu	Asp	Gly	Met	Asp	Cys	Met	Asp	Asn	Glu	Arg	
450									455				460			
Arg	Pro	His	Phe	Pro	Gln	Phe	Ser	Tyr	Ser	Ala	Ser	Gly	Arg	Glu		
465									470				475			

```
<210> 5793
<211> 2767
<212> DNA
<213> Homo sapiens
```

```

<400> 5793
aattcggcac taggggcagc tgtcggctgg aaggaactgg tctgctcaca cttgctggct
60
tgcgcatcag gactggcctt atctcctgac tcacggtgca aagggtgact ctgcgaacgt
120
taagtccgtc cccagcgctt ggaatcctac ggccccaca gccggatccc ctcagccttc
180
caggtcctca actcccgtgg acgctgaaca atggcctcca tggggctaca ggtaatgggc
240
atcgcgctgg ccgtcctggg ctggctggcc gtcatgctgt gctgcgcgct gcccatgtgg
300
cgcgtgacgg ccttcacgag cagcaacatt gtcacctcgc agaccatctg ggagggccta
360
tggatgaact gcgtggtgca gagcaccggc cagatgcagt gcaagggtgta cgactcgctg
420
ctggcaactgc cgcaggacct gcaggcggcc cgcgcctcgc tcatcatcag catcatcgctg
480
gctgctctgg gcgtgctgct gtccgtggtg gggggcaagt gtaccaactg cctggaggat
540
gaaagcgcca aggccaagac catgatcgct gcgggcgtgg tgttctctgt ggccggcctt
600
atggtgatag tgccggtgtc ctggacggcc cacaacatca tccaagactt ctacaatccg
660
ctggtggcct ccgggcagaa gcgggagatg ggtgcctcgc tctacgtcgg ctggggccgc
720
tccggcctgc tgctccttgg cggggggctg ctttgtgtgca actgtccacc ccgcacagac
780
aagccttact ccgccaagta ttctgtgccc cgctctgctg ctgccagcaa ctacgtgtaa
840

```

gggtgccacgg ctccactctg ttcctctctg ctttgttctt ccctggactg agctcagcgc
900
aggctgtgac cccaggaggg ccctgccacg ggccactggc tgctggggac tggggactgg
960
gcagagactg agccaggcag gaaggcagca gccttcagcc tctctggccc actcggacaa
1020
cttcccaagg cgcctcctg ctagcaagaa cagagtccac cctcctctgg atattgggga
1080
gggacggaag tgacagggtg tgggtggtgga gtggggagct ggcttctgct ggccaggata
1140
gcttaaccct gactttggga tctgcctgca tggcggttg ccactgtccc catttacatt
1200
ttccccactc tgtctgcctg catctcctct gtccgggta ggcttgata tcacctctgg
1260
gactgtgcct tgctcaccga aaccgcgcc caggagtatg gctgaggcct tgcccacca
1320
cctgcctggg aagtgcagag tggatggacg ggtttagagg ggaggggcca aggtgctgta
1380
aacaggtttg ggcagtgtg ggggaggggg ccagagaggc ggctcagggt gccagctct
1440
gtggcctcag gactctctgc ctacccgct tcagccagg gccctggag actgatcccc
1500
tctgagtcct ctgcccctc caaggacact aatgagcctg ggaggggtggc agggaggagg
1560
ggacagcttc acccttgga gtcctgggggt tttcctctt ccttcttgt ggtttctgtt
1620
ttgtaattta agaagagcta ttcactctg taattattat tattttctac aataaatggg
1680
acctgtgcac aggaggaaaa aaaaaaaaaa aaaaggagac cacagcctgc caaggagca
1740
gctgccccaa tgtttcctga cccgtgacct agagatgaag taatttgatt tattccctat
1800
ttcctttagt ctcaatggct aaggggtaat ggatggaaat ggggagaatg accgagtaga
1860
ggcaaggacg aagctcattc ttaaagaaaa acctcaaagt tcaacttcaa acagctgaaa
1920
tttgtttcat agctgttggc ccccagttc tagccaacca ggaataaatt atagttttgc
1980
cacctcagca gatggcaaaa ggagctttcc agaactttgg cctggtctgc accagggtacc
2040
aacatcacag ctgctaaaat caccagaagg gattttggaa ccgctgtact agtgtccttt
2100
cattcgatgg gatgtccagg cttcacccca aagaggcttc atttatgctt cttctcctgt
2160
gtgctggtga accaagagtc taggagcttc ttgctgtagt acaactgcca ggcatgcact
2220
tgactgcca acaccaacac caggtagatg atggaaacgg cagaaaaacc aaagaggaaa
2280
cggtaggcct tgccatggcg gtagagctgc tgtgcagcag ggaacatctc catgctgcca
2340
taaagttagtg gagcgatgga aaagagtccc atgctgatca tggagagcac caggtagcta
2400
atgttgttgc ggggaaagga gagaaggccc aagagagagg gcaaaatgct cagcaaatac
2460

ggggtattccc actgataggg catggccacc tgatcatgtg acaagagcct caggtgtccc
 2520
 acgtcatct tagcaaccag cagcagccat atgaccagat gtacgtagat cagcttcttg
 2580
 atttcatact tgagggtcac actcatctgg tagtgcatgg cgacgcgctc ccggtgctga
 2640
 aagtcgctgc cgtcgggtgcc ggccgctcgc gggcctgctc gagacgcat tgtgcctgcc
 2700
 cagaaccccc gaaccctca cgcggaacctg gtaccgcaac gacagccaag cggcccgatg
 2760
 accctat
 2767

<210> 5794
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 5794
 Met Ala Ser Met Gly Leu Gln Val Met Gly Ile Ala Leu Ala Val Leu
 1 5 10 15
 Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg Val
 20 25 30
 Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ser Gln Thr Ile Trp Glu
 35 40 45
 Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
 50 55 60
 Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala
 65 70 75 80
 Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val Leu
 85 90 95
 Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu Ser
 100 105 110
 Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala
 115 120 125
 Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile
 130 135 140
 Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu Met
 145 150 155 160
 Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu
 165 170 175
 Gly Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro
 180 185 190
 Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr
 195 200 205
 Val

<210> 5795
 <211> 993
 <212> DNA
 <213> Homo sapiens

<400> 5795

ccacatacaa agaggaaaga tgaaactttt attgttacat ttattgacac tggatattta
 60
 ttatctgtta tataccaggc aaaatggaca caccatcagg agataagacc tgtatcttac
 120
 gtgtaagatg aaacttatat ttattgattg aattattgaa tactttttga gtatttgcta
 180
 tataccaggc aaaaggcaca gaacaaatta tttgttcaca gttactttta actctttcag
 240
 caatgcctga gtcctcttta tagaaacttc attttgctaa gttagcaacc attcattttt
 300
 ttggttactc ttcattgata gttttctcaa gtgtctcttc aaatactgca taatgggtata
 360
 gaccatttaa tattccaaac ataacttgaa agactagagg aatcgccatt aatttcattt
 420
 gtgtttgaca aagcgtcatc caatggatta aaacccttcc ttttggtggc agtggaaacgg
 480
 tatgatactt gggtgccagg cgtccatttt tagtaaaagc caaagaactg ggatagaaaa
 540
 caccacaaac tatgccaatc agtgagcttc tgaaaacaca gttttccttg cttatattat
 600
 ctgaatacaa agcatcaatt acaaaaagct tgtcagtaac aacagtagac aaaaatggaa
 660
 gtgtagccaa tgatgcatat gtcttcaaag catcatgttt aaccttgaag cagcgtctga
 720
 acaggaagtt tgagaatatt ccagagaaac cagctgttgt tccaaatgtc gccatttgat
 780
 atatattttg tgtcatttct tttctaagat agtcaaaatt tttttctatg atttctatga
 840
 ccattggtct tctgagtttt gcattctcta gagaaggact gggctgacca tgcatagatg
 900
 ctgccatctt gaaaaccttg ggcgcttcct cagttcccac cggcaccaca cctgaatccc
 960
 ttggcttagt cccagcctca taccgaaca cca
 993

<210> 5796

<211> 200

<212> PRT

<213> Homo sapiens

<400> 5796

Met	Ala	Ala	Ser	Met	His	Gly	Gln	Pro	Ser	Pro	Ser	Leu	Glu	Asp	Ala
1				5				10						15	
Lys	Leu	Arg	Arg	Pro	Met	Val	Ile	Glu	Ile	Ile	Glu	Lys	Asn	Phe	Asp
		20						25					30		
Tyr	Leu	Arg	Lys	Glu	Met	Thr	Gln	Asn	Ile	Tyr	Gln	Met	Ala	Thr	Phe
		35					40					45			
Gly	Thr	Thr	Ala	Gly	Phe	Ser	Gly	Ile	Phe	Ser	Asn	Phe	Leu	Phe	Arg
		50				55					60				
Arg	Cys	Phe	Lys	Val	Lys	His	Asp	Ala	Leu	Lys	Thr	Tyr	Ala	Ser	Leu
65					70					75				80	
Ala	Thr	Leu	Pro	Phe	Leu	Ser	Thr	Val	Val	Thr	Asp	Lys	Leu	Phe	Val
				85					90					95	
Ile	Asp	Ala	Leu	Tyr	Ser	Asp	Asn	Ile	Ser	Lys	Glu	Asn	Cys	Val	Phe

```

      100      105      110
Arg Ser Ser Leu Ile Gly Ile Val Cys Gly Val Phe Tyr Pro Ser Ser
      115      120      125
Leu Ala Phe Thr Lys Asn Gly Arg Leu Ala Thr Lys Tyr His Thr Val
      130      135      140
Pro Leu Pro Pro Lys Gly Arg Val Leu Ile His Trp Met Thr Leu Cys
      145      150      155      160
Gln Thr Gln Met Lys Leu Met Ala Ile Pro Leu Val Phe Gln Ile Met
      165      170      175
Phe Gly Ile Leu Asn Gly Leu Tyr His Tyr Ala Val Phe Glu Glu Thr
      180      185      190
Leu Glu Lys Thr Ile His Glu Glu
      195      200

```

<210> 5797

<211> 405

<212> DNA

<213> Homo sapiens

<400> 5797

```

ctcagatcaa taccccgact ggccagtcga gggaactgct gagagcggct tgcgtgtgtc
60
gaggagcaga aagaggatgg ccctcactcc agctcctgca ctgccagcag cccaccctgc
120
ttctctcttg ccagcagcca aaagcaggca actgccggac agtcctaacc caaggcgggt
180
agaagggagc agagaccagg cctggcccct tcagactttc tcacagagaa attacagatc
240
tctaagcctc tattgttggc tggcgaggga gggaagaaca tcaagttatc agggaaatca
300
aggatccctc cgccccgcc ctgaaccagc aggtccggaa gggagcaagc ggtcaggagg
360
gccagtgcct tgcgggaacc ccagcctcat gaccaacctc ggccg
405

```

<210> 5798

<211> 109

<212> PRT

<213> Homo sapiens

<400> 5798

```

Met Ala Leu Thr Pro Ala Pro Ala Leu Pro Ala Ala His Pro Ala Ser
1      5      10      15
Leu Leu Pro Ala Ala Lys Ser Arg Gln Leu Pro Asp Ser Pro Asn Pro
20      25      30
Arg Arg Val Glu Gly Ser Arg Asp Gln Ala Trp Pro Leu Gln Thr Phe
35      40      45
Ser Gln Arg Asn Tyr Arg Ser Leu Ser Leu Tyr Cys Trp Leu Ala Arg
50      55      60
Glu Gly Arg Thr Ser Ser Tyr Gln Gly Asn Gln Gly Ser Leu Arg Pro
65      70      75      80
Arg Pro Glu Pro Arg Gly Pro Glu Gly Ser Lys Arg Ser Gly Arg Pro
85      90      95
Val Pro Cys Gly Asn Pro Ser Leu Met Thr Asn Leu Gly

```

100

105

<210> 5799

<211> 4261

<212> DNA

<213> Homo sapiens

<400> 5799

agtgggtgga gaagccactc tcccgaacc agagggatgg ggccggctgt gcagtagaac
60
ggggatcgaa aagaggaaaa caagggcacg aagaccagcg agaaagaaga ggacacctgg
120
gaaaggcgga agcagaagac ggggaaggga aaagaaaccc atagcagggtg gaaaccagat
180
ctagagcaac accgtcagggt tcacagtttg tttttctaga agagaagaaa gtacctgagg
240
attgctcttt tttcctaccg ttaatgaaaa ctacttttgt cttcatcata aaagaaaaaa
300
ctaaggggag gtaaaggcag tctcctgttt tattaggggg agagggtgaag ggaaatccag
360
gctcactttc tgaataagcc actgcctggt gcacagagca gaaccatcct ggtttctgaa
420
gacacatccc tttcagcaga attccagccg gagtcgctgg cacagttcta tttttatatt
480
taaattgtatg tctccctgg cctttttttt tttttttttt ttttttttagc aacacttttc
540
ttgtttgtaa acgcgagtga ccagaaagtg tgaatgcgga gtaggaatat ttttcgtgtt
600
ctcttttatc tgcttgccct ttttagagag tagcagtgggt tcctatttcg gaaaaggacg
660
ttctaattca aagctctctc ccaatatatt tacacgaata cgcatttaga aaggagggca
720
gcttttgagg ttgcaatcct actgagaagg atggaagaag gagccaggca ccgaaacaac
780
accgaaaaga aacaccaggg tgggggagag tcggacgcca gccccgaggc tgggtccgga
840
gggggaggag tagccctgaa gaaagagatc ggatttgtca gtgcctgtgg tatcatcgta
900
gggaacatca tcggctctgg aatctttgtc tcgcaaaagg gagtgctgga gaatgctggg
960
tctgtgggcc ttgctctcat cgtctggatt gtgacgggct tcatcacagt tgtgggagcc
1020
ctctgctatg ctgaactcgg ggtcaccatc cccaaatctg gaggtgacta ctccatgtc
1080
aaggacatct tcggaggact ggctgggttc ctgaggctgt ggattgctgt gctggtgatc
1140
taccacacca accaggctgt catcgccctc accttctcca actacgtgct gcagccgctc
1200
ttcccccact gcttcccccc agagtctggc cttcggctcc tggctgccat ctgcttattg
1260
ctcctcacat ggggtcaactg ttccagtgtg cgggtggcca cccgggttca agacatcttc
1320
acagctggga agctcctggc cttggccctg attatcatca tggggattgt acagatatgc
1380

aaaggagagt acttctggct ggagccaaag aatgcatttg agaatttcca ggaacctgac
1440
atcggcctcg tcgcactggc ttctcttcag ggctcctttg cctatggagg ctggaacttt
1500
ctgaattaag tgactgagga gcttgttgat ccctacaaga accttcccag agccatcttc
1560
atctccatcc cactggtcac atttgtgtat gtctttgcc aatgtcgctta tgtcactgca
1620
atgtccccc aggagctgct ggcattccaac gccgtcgctg tgacttttgg agagaagctc
1680
ctaggagtca tggcctggat catgccatt tctgttgccc tgtccacatt tggaggagtt
1740
aatgggtctc tcttcacctc ctctcggtg ttcttcgctg gagcccgaga gggccacctt
1800
cccagtgtgt tggccatgat ccacgtgaag cgctgcaccc caatcccagc cctgctcttc
1860
acatgcatct ccacctgct gatgctggc accagcgaca tgtacacact catcaactac
1920
gtgggcttca tcaactacct ctctatggg gtcacgggtg ctggacagat agtccctcgc
1980
tggaagaagc ctgatatccc ccgcccac aagatcaacc tgctgttccc catcatctac
2040
ttgctgttct gggccttcct gctggtcttc agcctgtggt cagagccggt ggtgtgtggc
2100
attggcctgg ccatcatgct gacaggagt cctgtctatt tcctgggtgt ttactggcaa
2160
cacaagccca agtggttcag tgacttcatt gagctgctaa ccctggtgag ccagaagatg
2220
tgtgtggtcg tgtacccga ggtggagcgg ggctcgggga cagaggaggc taatgaggac
2280
atggaggagc agcagcagcc catgtaccaa cccactccca cgaaggacaa ggacgtggcg
2340
gggcagcccc agccctgagg accaccattc cctggtact ctctccttc tcccccttt
2400
atcctacctc cctgccttgg tcccgccaac acatgcgagt acacacacac ccctctctct
2460
gcttttgtca ggcagtggta ggactttggt gtgggtggtg agaaattgta aaaaaaact
2520
gacattcata cccaaagaac cagcctctca cccagggtc catgtcccag gcccactcc
2580
agtgtgccc aactcccag ctgctggagg agaggggaga tgccaagggt ccctgcagga
2640
cctccctcgg ggccacaccc tcagctgctt cttcaggaac cggagctcat tactgccttc
2700
cctcccaggg agggcccttc agagaggaga ggccacagga gctgcattgt ggggggacag
2760
gctcaagcaa ttctgtcccc atcaaggggt cagctggaga gacccaagac cctatctgtt
2820
caccagggac ccaaaatcca aggggatgct tccctctgcc ctctttcctg cccctcccca
2880
tcatacctgc acccacccca gccagggtc cctgtccaga attcggttct cctcaggacg
2940
ccaactccca gagctaagga ccaaggagaa gaacagcctc tccaccccca agccaggcgg
3000

ttgaggaaca tattgagaaa ggttcagatt gcagaaaccc agccctgccc ctgcctcctg
 3060
 catccagccc ccaacatggt gccaaagctt ccagaagcca aaaagcttct gatttttaag
 3120
 gtagtgggca tctctctcct aatgacgaag ctgctcagca actccacctg cccgccgcag
 3180
 gaaggagcag tccctgcta tccctgcagc cactcccagc acaccgcac acagccagca
 3240
 ccaccgcccc caccgtgcac ttctcctctc tgggccttgg cttgggacca ggtacgaagg
 3300
 atccccaagc ccttcaggcc tgagatcaga gccagatcag ccttaagtca cctcccatcc
 3360
 aagaacttgg cctaaaaata ctcccctatt tctaaccctc aggacggatc tgatattaaa
 3420
 tgccttccct gggaggaagg gtgctttccc cctccctaga ggtgccatt ccataccctg
 3480
 ggagactgag gagagcattg gctgaagccc agttcctttc ccatccatcc ccaactccaa
 3540
 taatccccca ctccctgcag gtctcagtgt catgctgtct tggggcaggg tgaaagggta
 3600
 gtggcagcag ggcgccact ctggagatcc tcaaaaaagg cctcctctg tggctggcag
 3660
 cctctgacct ttccctgggc ttcaaaggaa ggctatggag tttgctgtgg gcctgcaac
 3720
 cttccagcc actcctgctg cactaaggac ttaggatcct tttatcacia atcgggatcc
 3780
 tctccccac ccgaattct gtctgcttaa actggaatac acaggagccc ttctggcct
 3840
 ggatggtgtc tcccagcttc ccgcccagc ttgccaccc catagtgtgt gagatgccaa
 3900
 gtttggctctg agttgtgacc ccttcagagt agatgcccg caggctgggg ttggccctg
 3960
 gagggtcagg ggaccatctt cttattccct cttttctcat tctccaact tctccctc
 4020
 cttcaattat tttttgtaa agttgatgcc ttactttttg gataaatatt tttgaagctg
 4080
 gtatttctat ttcttttgga ttttttttaa tgtaagggtt ttttggggga tggagttaga
 4140
 accttaatga taatttctt cgtttgggtg aggttttaga gatttgttt gtggagaggt
 4200
 ttttttctt tgatgtaata aaatttaaaa tggaaatgaa aaaaaaaaaa aaaaaaaaaa
 4260
 a
 4261

<210> 5800

<211> 535

<212> PRT

<213> Homo sapiens

<400> 5800

Met Glu Glu Gly Ala Arg His Arg Asn Asn Thr Glu Lys Lys His Pro
 1 5 10 15
 Gly Gly Gly Glu Ser Asp Ala Ser Pro Glu Ala Gly Ser Gly Gly Gly

			20					25					30			
Gly	Val	Ala	Leu	Lys	Lys	Glu	Ile	Gly	Leu	Val	Ser	Ala	Cys	Gly	Ile	
		35					40					45				
Ile	Val	Gly	Asn	Ile	Ile	Gly	Ser	Gly	Ile	Phe	Val	Ser	Pro	Lys	Gly	
		50				55				60						
Val	Leu	Glu	Asn	Ala	Gly	Ser	Val	Gly	Leu	Ala	Leu	Ile	Val	Trp	Ile	
65					70					75				80		
Val	Thr	Gly	Phe	Ile	Thr	Val	Val	Gly	Ala	Leu	Cys	Tyr	Ala	Glu	Leu	
				85				90						95		
Gly	Val	Thr	Ile	Pro	Lys	Ser	Gly	Gly	Asp	Tyr	Ser	Tyr	Val	Lys	Asp	
			100					105					110			
Ile	Phe	Gly	Gly	Leu	Ala	Gly	Phe	Leu	Arg	Leu	Trp	Ile	Ala	Val	Leu	
		115				120						125				
Val	Ile	Tyr	Pro	Thr	Asn	Gln	Ala	Val	Ile	Ala	Leu	Thr	Phe	Ser	Asn	
		130				135						140				
Tyr	Val	Leu	Gln	Pro	Leu	Phe	Pro	Thr	Cys	Phe	Pro	Pro	Glu	Ser	Gly	
145					150					155				160		
Leu	Arg	Leu	Leu	Ala	Ile	Cys	Leu	Leu	Leu	Leu	Leu	Thr	Trp	Val	Asn	
				165				170						175		
Cys	Ser	Ser	Val	Arg	Trp	Ala	Thr	Arg	Val	Gln	Asp	Ile	Phe	Thr	Ala	
			180					185					190			
Gly	Lys	Leu	Leu	Ala	Leu	Ala	Leu	Ile	Ile	Ile	Met	Gly	Ile	Val	Gln	
		195				200						205				
Ile	Cys	Lys	Gly	Glu	Tyr	Phe	Trp	Leu	Glu	Pro	Lys	Asn	Ala	Phe	Glu	
		210				215					220					
Asn	Phe	Gln	Glu	Pro	Asp	Ile	Gly	Leu	Val	Ala	Leu	Ala	Phe	Leu	Gln	
225					230					235				240		
Gly	Ser	Phe	Ala	Tyr	Gly	Gly	Trp	Asn	Phe	Leu	Asn	Tyr	Val	Thr	Glu	
				245				250						255		
Glu	Leu	Val	Asp	Pro	Tyr	Lys	Asn	Leu	Pro	Arg	Ala	Ile	Phe	Ile	Ser	
			260					265					270			
Ile	Pro	Leu	Val	Thr	Phe	Val	Tyr	Val	Phe	Ala	Asn	Val	Ala	Tyr	Val	
		275				280						285				
Thr	Ala	Met	Ser	Pro	Gln	Glu	Leu	Leu	Ala	Ser	Asn	Ala	Val	Ala	Val	
		290				295					300					
Thr	Phe	Gly	Glu	Lys	Leu	Leu	Gly	Val	Met	Ala	Trp	Ile	Met	Pro	Ile	
305					310					315				320		
Ser	Val	Ala	Leu	Ser	Thr	Phe	Gly	Gly	Val	Asn	Gly	Ser	Leu	Phe	Thr	
				325				330						335		
Ser	Ser	Arg	Leu	Phe	Phe	Ala	Gly	Ala	Arg	Glu	Gly	His	Leu	Pro	Ser	
			340					345					350			
Val	Leu	Ala	Met	Ile	His	Val	Lys	Arg	Cys	Thr	Pro	Ile	Pro	Ala	Leu	
		355				360						365				
Leu	Phe	Thr	Cys	Ile	Ser	Thr	Leu	Leu	Met	Leu	Val	Thr	Ser	Asp	Met	
		370				375										

450		455		460	
Leu Gly Val Tyr Trp Gln His Lys Pro Lys Cys Phe Ser Asp Phe Ile					
465		470		475	480
Glu Leu Leu Thr Leu Val Ser Gln Lys Met Cys Val Val Val Tyr Pro					
	485		490		495
Glu Val Glu Arg Gly Ser Gly Thr Glu Glu Ala Asn Glu Asp Met Glu					
	500		505		510
Glu Gln Gln Gln Pro Met Tyr Gln Pro Thr Pro Thr Lys Asp Lys Asp					
	515		520		525
Val Ala Gly Gln Pro Gln Pro					
	530		535		

<210> 5801

<211> 2418

<212> DNA

<213> Homo sapiens

<400> 5801

```

nntccggaag tgctcagtca tgttcatagc aactcctaga gggcagagat ttcattctgct
60
ctgccccaccg ctatatagcc agccactaga acaggccgga agcgagagaa gagctaagat
120
cccacctcag acgacgtcat ggactcgttc ctggaaaagt tccagagcca gccttaccgt
180
ggcggccttc atgaggacca gtgggagaag gaatttgaaa aggtccccct atttatgtcg
240
agagcgccat cagaaattga tcccaggag aatcctgact tggtttgtct ccagtcaatt
300
atTTTTgatg aggagcgttc tccagaagaa caggccaaga cctataaaga tgagggcaat
360
gattacttta aagaaaaaga ctacaagaaa gctgtaattt catacactga aggcttaaa
420
aagaaatgtg cagatcctga tttgaatgct gtcctttata ccaaccgggc agcagcacag
480
tactatctgg gcaattttcg ttctgctctc aatgatgtga cagctgccag aaagctaaaa
540
ccctgccacc tcaaagcaat aataagaggt gccttatgcc atctggaact gaaacacttt
600
gccgaggccg tgaactggtg tgatgagggg ctgcaaatag atgccaaaga gaagaagctt
660
ctggaaatga gggctaaagc agacaagctg aagogaattg aacagagggg tgtgaggaaa
720
gccaacttga aagaaaagaa ggagaggaat cagaatgagg ctttactcca ggccatcaag
780
gctaggaata tcaggctctc agaagctgcc tgtgaggatg aagattcagc ctcagaaggt
840
ctagggtgagc ttttcttgga tggactcagc actgagaacc cccatggagc caggctgagt
900
ctagatggcc agggcaggct gagctggcct gtgctctttc tgtaccaga gtatgccag
960
tcggacttca tctctgcttt tcatgaggac tccaggttta ttgatcatct aatgggtgatg
1020
tttggtgaaa caccctcttg ggacctagag caaaaatatt gcctgataat ttggagggtct
1080

```

actttgagga tgaggacagg gcagaactat accgggtgcc tgccaagagc accttgctac
1140
aggttctaca gcaccagagg tactttgtaa aagccctgac accagcattt ttggtctgtg
1200
taggatcctc tcctttttgc aagaattttc tccgggggag aaaggtgtac cagatacgat
1260
gactaagcca gggccctgg atctcctccc ttaccctcct ctgctgggaa cctagcacac
1320
ctgaatcagc tggacatact gctggagtcc agtgctttct ttccgtcacc ctggggatag
1380
tccttctcgg catcggtgtg ggggaggagc ctctggcttc cctaaactgc agcctctctg
1440
gctggtcttc actttctca gttgatataa aactctgggt ctgggccatg atgtccttgg
1500
actccatcgc taaagggacc atctgctgca gttaccacag caactgacct gagcggcacc
1560
ctggtctgtg gagatggact caggatccag tgacatgatt ctgaactttt gtggagtgtg
1620
acaccttaga gaagctaccc ctcaaactgc acatctacac acaaacaaac aatgcatagg
1680
attccaaggc tttaaagctg agagaccctg gcctcaagtt atttcatgcg cacagagga
1740
agccatgtgg ggttgctgaa gatgccttga ggtgaaatgg gggcaggaaa gccacatctt
1800
gctctgcatt tataaagacc gtacaaactg agatccttgg taccctaaa aagattgcca
1860
attttcttca tctttgccat atggaggact gtgacagact ttggacagtg gcctcttgag
1920
ttcctctgca gttttgacat ttaggatttt gtgtctttta aactggaaaa tcttctagca
1980
tgttgggttg ttacagagta ttttttgtc tgcagctgtt tgttgccca ttcctaagag
2040
gagtttatcc atcctgactt gtagctgtgt gacttcttgc agtgcccca cccatacc
2100
cccgggagag tgtacttccc tgctcccaat gcagagggat atgcacaggc atgagctgtc
2160
ctgcgtctga cagaagcctg aagagtcatg tgtggttggc ctgtgctctt ccctctgctg
2220
tgagaacaca tttccacag aggagccgtt ccatggagcc gagctacagc agctggcctg
2280
cagccactga gtgtcacagc aatgagagag caatgtttgc thtagtaagc agtgagattt
2340
agggttgggt tgttactata gcagagctaa tacatgagta aactgaaaaa aaaaaaaaaa
2400
aaaaaaaaaa aaaaaaaaaa
2418

<210> 5802

<211> 350

<212> PRT

<213> Homo sapiens

<400> 5802

Asp Pro Thr Ser Asp Asp Val Met Asp Ser Phe Leu Glu Lys Phe Gln

```

      1           5           10           15
Ser Gln Pro Tyr Arg Gly Gly Phe His Glu Asp Gln Trp Glu Lys Glu
      20           25           30
Phe Glu Lys Val Pro Leu Phe Met Ser Arg Ala Pro Ser Glu Ile Asp
      35           40           45
Pro Arg Glu Asn Pro Asp Leu Ala Cys Leu Gln Ser Ile Ile Phe Asp
      50           55           60
Glu Glu Arg Ser Pro Glu Glu Gln Ala Lys Thr Tyr Lys Asp Glu Gly
      65           70           75           80
Asn Asp Tyr Phe Lys Glu Lys Asp Tyr Lys Lys Ala Val Ile Ser Tyr
      85           90           95
Thr Glu Gly Leu Lys Lys Lys Cys Ala Asp Pro Asp Leu Asn Ala Val
      100          105          110
Leu Tyr Thr Asn Arg Ala Ala Ala Gln Tyr Tyr Leu Gly Asn Phe Arg
      115          120          125
Ser Ala Leu Asn Asp Val Thr Ala Ala Arg Lys Leu Lys Pro Cys His
      130          135          140
Leu Lys Ala Ile Ile Arg Gly Ala Leu Cys His Leu Glu Leu Lys His
      145          150          155          160
Phe Ala Glu Ala Val Asn Trp Cys Asp Glu Gly Leu Gln Ile Asp Ala
      165          170          175
Lys Glu Lys Lys Leu Leu Glu Met Arg Ala Lys Ala Asp Lys Leu Lys
      180          185          190
Arg Ile Glu Gln Arg Asp Val Arg Lys Ala Asn Leu Lys Glu Lys Lys
      195          200          205
Glu Arg Asn Gln Asn Glu Ala Leu Leu Gln Ala Ile Lys Ala Arg Asn
      210          215          220
Ile Arg Leu Ser Glu Ala Ala Cys Glu Asp Glu Asp Ser Ala Ser Glu
      225          230          235          240
Gly Leu Gly Glu Leu Phe Leu Asp Gly Leu Ser Thr Glu Asn Pro His
      245          250          255
Gly Ala Arg Leu Ser Leu Asp Gly Gln Gly Arg Leu Ser Trp Pro Val
      260          265          270
Leu Phe Leu Tyr Pro Glu Tyr Ala Gln Ser Asp Phe Ile Ser Ala Phe
      275          280          285
His Glu Asp Ser Arg Phe Ile Asp His Leu Met Val Met Phe Gly Glu
      290          295          300
Thr Pro Ser Trp Asp Leu Glu Gln Lys Tyr Cys Leu Ile Ile Trp Arg
      305          310          315          320
Ser Thr Leu Arg Met Arg Thr Gly Gln Asn Tyr Thr Gly Cys Leu Pro
      325          330          335
Arg Ala Pro Cys Tyr Arg Phe Tyr Ser Thr Arg Gly Thr Leu
      340          345          350

```

<210> 5803

<211> 692

<212> DNA

<213> Homo sapiens

<400> 5803

nacgcgtgaa ggggacgccg ggaacaggaa tttcttcaca tggctcctgg agaagtgacc
60

atcacagttc gcctcatccg ttcctttgaa catcgcaatt tcaaacctgt agtgtatcac
120

ggagtgaatt tggaccaaac tgtaaaggaa tttatcgtat ttctaaagca agatgtccct
 180
 ttaaggacca acctgccacc accattcaga aattataaat atgatgcact aaagattatt
 240
 catcaagcac ataaatcaaa gacaaatgaa cttgtgttga gtttggaaga tgacgaaaga
 300
 ctctgtctga aagaagacag cactctgaaa gcagctggaa tcgccagtga aactgaaatt
 360
 gcattcttct gtgaagaaga ttataggaac tacaaagcta atcccatttc atcctggtga
 420
 aaacatctcg agggcttcct ttttgcatat ctgtattaag ctctttattc cactgctgag
 480
 tttttgaaat tgacaaacaa atcttaaaaa attaatccca ggctatactc tttgagctaa
 540
 aatctggtta tttctttctc ttcaggtctt tctttccttc tctctttctt tttctttggt
 600
 gttgtaaaat aatatattat gagaaaaaca tttgatcttt ttaaaggga ataaattggt
 660
 attaaaaatt aaaaaaaaaa aaaaaaaaaa aa
 692

<210> 5804

<211> 126

<212> PRT

<213> Homo sapiens

<400> 5804

Met	Ala	Pro	Gly	Glu	Val	Thr	Ile	Thr	Val	Arg	Leu	Ile	Arg	Ser	Phe
1				5					10					15	
Glu	His	Arg	Asn	Phe	Lys	Pro	Val	Val	Tyr	His	Gly	Val	Asn	Leu	Asp
			20					25					30		
Gln	Thr	Val	Lys	Glu	Phe	Ile	Val	Phe	Leu	Lys	Gln	Asp	Val	Pro	Leu
			35				40					45			
Arg	Thr	Asn	Leu	Pro	Pro	Pro	Phe	Arg	Asn	Tyr	Lys	Tyr	Asp	Ala	Leu
			50				55				60				
Lys	Ile	Ile	His	Gln	Ala	His	Lys	Ser	Lys	Thr	Asn	Glu	Leu	Val	Leu
65				70					75					80	
Ser	Leu	Glu	Asp	Asp	Glu	Arg	Leu	Leu	Leu	Lys	Glu	Asp	Ser	Thr	Leu
			85					90					95		
Lys	Ala	Ala	Gly	Ile	Ala	Ser	Glu	Thr	Glu	Ile	Ala	Phe	Phe	Cys	Glu
			100					105					110		
Glu	Asp	Tyr	Arg	Asn	Tyr	Lys	Ala	Asn	Pro	Ile	Ser	Ser	Trp		
			115				120					125			

<210> 5805

<211> 1112

<212> DNA

<213> Homo sapiens

<400> 5805

nntccggagc tccccgctct ccacctcccc ttctgtgggt tccaccacta tggagggcag
 60
 acggctccttc agtttgcagc agcgggtcaaa atctgacggg tctgggaaga tctggttagga
 120

aaggccatcc ttgcgggggc tgaggccgat ctctcccatg ggctgagtgc tcagtggaga
180
gcggggagtt gtgtccacct tgccgacgtc gctagccgtg gggctgtcct gggaaggcgg
240
acggcgagcg cccgggtgtcc gcaactcggcc gcctgccgtg cccgtctgcg cccgtgtcat
300
cctcactcgg gacgcagggg ccgttttttaa atcacagggg cgtgtgtcag cctgccctag
360
gacttcatgt ctatatatctt cccattcac tgccccgact atctgagatc ggccaagatg
420
actgaggtga tgatgaacac ccagcccatg gaggagatcg gcctcagccc ccgcaaggat
480
ggcctttcct accagatctt cccagaccg tcagattttg accgctgctg caaactgaag
540
gaccgtctgc cctccatagt ggtggaaccc acagaagggg aggtggagag cggggagctc
600
cggtggcccc ctgaggagtt cctggtccag gaggatgagc aagataactg cgaagagaca
660
gcgaaagaaa ataaagagca gtagagtccc tgtggactcc catgggtcat accagccagc
720
atctgttctt gaactgtgtt tttcccatca tgacggaaga agagagttag ccgcaattgt
780
tctgaaaatg tcaaacgagg cttctgtttt gcacctgcag atcaccgagt tggttttctt
840
ttcttttctt gccttttttt ttttttgaaa tttgccgagc agtggagccc tctgacaatt
900
tgcaaggccc tctgagaaag gaagctgctt agagccaggg ggttagtggg tgaggggagc
960
gagtgtgtt tttgagatca ttatctgaac tcaggcagcc tagtagaggg agtgggtggg
1020
ttccaatggg tcttgggtgg tgggaggtgg ggcattgtgca aagcaagcaa ggaacatttg
1080
gggtaagaaa acaaacatga ggcaaaaaaa aa
1112

<210> 5806

<211> 105

<212> PRT

<213> Homo sapiens

<400> 5806

Met	Ser	Ile	Tyr	Phe	Pro	Ile	His	Cys	Pro	Asp	Tyr	Leu	Arg	Ser	Ala
1				5					10					15	
Lys	Met	Thr	Glu	Val	Met	Met	Asn	Thr	Gln	Pro	Met	Glu	Glu	Ile	Gly
		20						25				30			
Leu	Ser	Pro	Arg	Lys	Asp	Gly	Leu	Ser	Tyr	Gln	Ile	Phe	Pro	Asp	Pro
	35					40					45				
Ser	Asp	Phe	Asp	Arg	Cys	Cys	Lys	Leu	Lys	Asp	Arg	Leu	Pro	Ser	Ile
	50					55				60					
Val	Val	Glu	Pro	Thr	Glu	Gly	Glu	Val	Glu	Ser	Gly	Glu	Leu	Arg	Trp
65					70				75					80	
Pro	Pro	Glu	Glu	Phe	Leu	Val	Gln	Glu	Asp	Glu	Gln	Asp	Asn	Cys	Glu
				85				90						95	
Glu	Thr	Ala	Lys	Glu	Asn	Lys	Glu	Gln							

100

105

<210> 5807

<211> 1429

<212> DNA

<213> Homo sapiens

<400> 5807

accctccat ttctcgccat ggccctgca ctgctcctga tccctgctgc cctcgctct
60
ttcatcctgg cctttggcac cggagtggag ttcgtgctgt ttacctcct tcggccactt
120
cttggaggga tcccggagtc tgggtggtccg gatgcccgc agggatggct ggctgccctg
180
caggaccgca gcctccttgc cccctggca tgggatctgg ggctcctgct tctatttgtt
240
gggcagcaca gcctcatggc agctgaaaga gtgaaggcat ggacatcccg gtactttggg
300
gtccttcaga ggtcactgta tgtggcctgc actgccctgg ccttgagct ggtgatgcgg
360
tactgggagc ccatacccaa aggcctgtg ttgtgggagg ctgggctga gccatgggccc
420
acctgggtgc cgctcctctg ctttgtgctc catgtcatct cctggctcct catctttagc
480
atccttctcg tctttgacta tgetgagctc atgggcctca aacaggata ctaccatgtg
540
ctggggctgg gcgagcctct ggccctgaag tctccccggg ctctcagact cttctccac
600
ctgcgccacc cagtgtgtgt ggagctgctg acagtgtgtt ggggtggtgcc taccctgggc
660
acggaccgtc tctccttgc ttctcctctt accctctacc tgggcctggc tcacgggctt
720
gatcagcaag acctccgcta cctccgggccc cagctacaaa gaaaactcca cctgctctct
780
cggccccagg atggggaggc agagtgagga gctcactctg gttacaagcc ctgttcttcc
840
tctccactg aattctaaat ccttaacatc caggccctgg ctgcttcag ccagaggccc
900
aaatccatgg actgaaggag atgccccttc tactacttga gactttatc tctgggtcca
960
gtccataacc ctaaattctg agtttcagcc actgaactcc aaggctcact tctcaccagc
1020
aaggaagagt ggggtatgga agtcatctgt cccttcactg tttagagcat gacactctcc
1080
ccctcaacag cctcctgaga aggaaaggat ctgccctgac cactcccctg gcactgttac
1140
ttgcctctgc gcctcagggg tccccttctg caccgctggc ttccactcca agaagggtga
1200
ccagggtctg caagttcaac ggtcatagct gtccctccag gcccacact tgcctcacca
1260
ctccgggcc tagtctctgc acctccttag gccctgctc tgggctcaga ccccaacct
1320
gtcaagggga ttctcctgct cttaactcga tgacttgggg ctccctgctc tcccaggaa
1380

gatgctctgc aggaaaataa aagtcagcct ttttctacaa aaaaaaaaaa
1429

<210> 5808

<211> 261

<212> PRT

<213> Homo sapiens

<400> 5808

Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe	Ile	Leu
1			5					10						15	
Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser	Leu	Arg	Pro
		20					25					30			
Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp	Ala	Arg	Gln	Gly
	35					40					45				
Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu	Ala	Pro	Leu	Ala	Trp
	50				55					60					
Asp	Leu	Gly	Leu	Leu	Leu	Leu	Phe	Val	Gly	Gln	His	Ser	Leu	Met	Ala
65				70					75					80	
Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser	Arg	Tyr	Phe	Gly	Val	Leu	Gln
			85					90					95		
Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr	Ala	Leu	Ala	Leu	Gln	Leu	Val	Met
		100					105					110			
Arg	Tyr	Trp	Glu	Pro	Ile	Pro	Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg
	115					120						125			
Ala	Glu	Pro	Trp	Ala	Thr	Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His
	130					135					140				
Val	Ile	Ser	Trp	Leu	Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr
145				150					155					160	
Ala	Glu	Leu	Met	Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu
			165					170					175		
Gly	Glu	Pro	Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser
		180					185					190			
His	Leu	Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val
	195					200						205			
Val	Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
	210				215						220				
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg	Tyr
225				230					235					240	
Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg	Pro	Gln
			245					250						255	
Asp	Gly	Glu	Ala	Glu											
		260													

<210> 5809

<211> 2009

<212> DNA

<213> Homo sapiens

<400> 5809

nttttttttt ttttttttaa gatggaatct cgctccatca cccaggctgg agggcaatgg
60
cgtgatctcg gctcactgca gcctccacct cctgggttca agcaattctc ctgcctcagc
120

ctcctgagta gttggcacta taagcatcca acaccatgac cggctaattt ttgtgttttt
180
ggtagaagcg gggtttcacc atgttgcca ggctggctc aaactcctga cctcaggtga
240
tccaccacc tcgctctccc aaagtgtcg tattacaggc gtgagccacc gagcccaacc
300
tgagtcacga ttctctcgg taacaggagg gccccccagg gaaagagggc gggcgggcgg
360
tctgcggaag ggcattggct ctgaccaccg cacactctgg ccgccctccc gagtctccag
420
aactcctacg cctccttccc agcgggcaca ggccagccc gctgaccct ccccggaag
480
caggaggagc cctgcagaaa tcccaggag gaagtgggt ctggaacggc ctccctgcct
540
ctacgctcag gcggggaagc ctagttgcag agtgccgtgc caggaggtcc gggccacgtc
600
ccctgcacct ccccgagct gctcccagga cgggcagagg ctccggctgt ccacacctc
660
tgggtgaacg ctggggactt gcctggcgct gtgcgtgcac tgacctgcc aaggcccacg
720
tctgcacatc tgtgcacagc agagggaccg caccaggcca ggcactcacc tccgagtccc
780
gggtcccagga atgtggatga agagaggctg ctgtgcgact cagtgaagtg ggtgccctcg
840
ctgaaggtct aggggagatg ggggtgggat gagagggtgct ggggcttcac agggccccc
900
tccacccgcg attacagctg gagaggcagg actcaaacc atgtcccca gtccaaacc
960
ctggaaggct ggccccttct ctcagcctca gtttcccac acccctcgcc cccaactctg
1020
gggacaggaa actcagggtc tcaggcctca cggggactcc taccggctg gggtaaaagg
1080
aggagctgct ctggctcgcc ctgccccagg agcctgagct gggccggtcc tcaagacctg
1140
caggcaggac agagagagtt atgggtcacc ctcacgctg cccagctcta aaagcttcgg
1200
ttcatcatct caggggcaaa cctcagtga cccggggggc ttgtggaacc cttcctaacc
1260
cagcctcacc cagcccgact catgaggaca ccagtcagca gctaacacc agacacctg
1320
ggactcggag cacttacagg tccataaact taaattaact cttccgtcg ctctctgctg
1380
gccaaactct acccaccac taaagccca gctttcatac cctccttggg caaagacctc
1440
actctcacgc cgagcctcct ccccatcagc cccaagtccc tccctctggc ccagccctga
1500
ctatgtggac tgggtctct gtgtcagatg cagactcttc tgaccctgtg agaaaggctc
1560
atgacagcat gagggtgtgg aagctaacc atgagctctg gggaggcca ggtctcct
1620
gtcccacct gccagtgtgg gaagtgggc cgcccttgc tgaagcagca gcagaggctc
1680
acccatcggg caggaggctg gcagcccgtg aggggtggagc cgaatctcat ccccaggaa
1740

caagcccagt gtggagacca gaagcctgcg tggggcagga gttcccggcg cagcaagggg
 1800
 cgggacgagg accttggtcc cggggcgggg cgggcggggc ctttatctct cagaacactc
 1860
 acaggcaacg cccaggactc cagaatcttc tgccctgggc agggagggcc tgcttggtac
 1920
 cttccccctt ccatcggggg ccacagagca caccctgga gaagcaggag cgggccctgg
 1980
 gcctcctcag cttggccacg gagttgctg
 2009

<210> 5810

<211> 52

<212> PRT

<213> Homo sapiens

<400> 5810

Xaa	Phe	Phe	Phe	Phe	Lys	Met	Glu	Ser	Arg	Ser	Ile	Thr	Gln	Ala
1				5				10					15	
Gly	Gly	Gln	Trp	Arg	Asp	Leu	Gly	Ser	Leu	Gln	Pro	Pro	Pro	Gly
			20					25				30		
Phe	Lys	Gln	Phe	Ser	Cys	Leu	Ser	Leu	Leu	Ser	Ser	Trp	His	Tyr
		35					40					45		
His	Pro	Thr	Pro											
		50												

<210> 5811

<211> 1607

<212> DNA

<213> Homo sapiens

<400> 5811

gtttagcaaga aagtgatgtg ttccgggtag gggaattctg ttttggtatt attttgtctt
 60
 tcctgagaaa agcatcacia aaagagatgt ttgccatcc tgtttgctgg ggtagtggga
 120
 agagaccggg ggtgatggtg gtgctggctg gacgtgggtg gtttcacagg acctgctgtg
 180
 tctgagagga gccatgcggt gattagaagc ttggaggctg cagatctgcc gacaccccag
 240
 gccatcgagc cccaggccat cgtgcagcag gtcccagccc ccagtcgaat gcagatgccg
 300
 cagggaacc cgtgctgtgt gtcccacacc ctgcaggagc tgctggccag ggacaccgtg
 360
 cagggtggagc tcattccgga gaagaagggc ctcttctga agcatgtgga gtatgaggtt
 420
 tccagccagc gttcaagtc ctcggtatac agacggtaca atgacttcgt ggtcttccag
 480
 gagatgctcc tgcacaagtt cccctaccgt atggtgcctg ccctgccacc caagagaatg
 540
 ctgggagctg acaggaggtt catcgaggcc agggaggagag ccctgaagcg cttcgtcaac
 600
 ctggtggcgc gacaccccct gttctccgag gatgtggctc tcaagctctt cctgtccttc
 660

agcggctcgg atgtgcagaa caagttaaag gagtcagcac agtgcgtcgg ggacgaattc
 720
 ctgaactgta agctggctac cagggccaaag gacttcctcc cagctgacat ccaggctcag
 780
 ttgtccatca gccgggagct gatccggaac atctacaata gctttcacia gcttcgcgac
 840
 agggccgagc ggatcgcgtc gcgggccatc gacaatgcgg cagatcttct catattcggg
 900
 aaggagctaa gtgcaatagg gtctgacacg accccgctgc cctcctgggc cgctctgaat
 960
 agcagcacgt ggggggtccct gaagcaggct ctgaaaggcc tgtctgtgga attcgcgctg
 1020
 ctgcccagaca aggtgcaca acagggttaag caggaagaga acgacgtggg ggagaagctg
 1080
 aacctcttct tggatctgct gcagtcctat aaggacctgt gcgagcggca tgagaagggc
 1140
 gtgttgaca agcaccagcg ggccctgcac aagtacagcc tgatgaagag gcagatgatg
 1200
 agcgccaccg cgcagaaccg cgagccggag tccgtggagc agctggagtc ccgcatcgtg
 1260
 gagcaggaga acgcgattca gacgatggag ctgcggaact acttctccct gtactgcctg
 1320
 caccaggaga cgcagctcat ccacgtctac ctgcccctca cctcccacat cctccgcgcc
 1380
 ttcgtcaact ctcatatcca agggcacaag gagatgagca aggtgtggaa cgacctgagg
 1440
 cccaagctca gctgcctctt tgccggacca cacagcaccg tgacccacc gtgctccccg
 1500
 ccggaggacg gcctgtgtcc tctactagcg ctgaggctga ggtgggtgct cctgcggccg
 1560
 caagcttatt cccttagtg aggggttaatt ttagcttgca ctggccg
 1607

<210> 5812

<211> 463

<212> PRT

<213> Homo sapiens

<400> 5812

Trp	Trp	Cys	Trp	Leu	Asp	Val	Gly	Gly	Phe	Thr	Gly	Pro	Ala	Val	Ser
1			5					10						15	
Glu	Arg	Ser	His	Ala	Val	Ile	Arg	Ser	Leu	Glu	Ala	Ala	Asp	Leu	Pro
		20					25					30			
Thr	Pro	Gln	Ala	Ile	Glu	Pro	Gln	Ala	Ile	Val	Gln	Gln	Val	Pro	Ala
		35				40				45					
Pro	Ser	Arg	Met	Gln	Met	Pro	Gln	Gly	Asn	Pro	Leu	Leu	Leu	Ser	His
	50				55				60						
Thr	Leu	Gln	Glu	Leu	Leu	Ala	Arg	Asp	Thr	Val	Gln	Val	Glu	Leu	Ile
65			70					75					80		
Pro	Glu	Lys	Lys	Gly	Leu	Phe	Leu	Lys	His	Val	Glu	Tyr	Glu	Val	Ser
		85					90				95				
Ser	Gln	Arg	Phe	Lys	Ser	Ser	Val	Tyr	Arg	Arg	Tyr	Asn	Asp	Phe	Val
		100					105					110			
Val	Phe	Gln	Glu	Met	Leu	Leu	His	Lys	Phe	Pro	Tyr	Arg	Met	Val	Pro

115	120	125
Ala Leu Pro Pro Lys Arg Met	Leu Gly Ala Asp Arg	Glu Phe Ile Glu
130	135	140
Ala Arg Arg Arg Ala Leu Lys	Arg Phe Val Asn Leu Val	Ala Arg His
145	150	155
Pro Leu Phe Ser Glu Asp Val	Val Leu Lys Leu Phe Leu	Ser Phe Ser
165	170	175
Gly Ser Asp Val Gln Asn Lys	Leu Lys Glu Ser Ala Gln	Cys Val Gly
180	185	190
Asp Glu Phe Leu Asn Cys Lys	Leu Ala Thr Arg Ala Lys	Asp Phe Leu
195	200	205
Pro Ala Asp Ile Gln Ala Gln	Phe Ala Ile Ser Arg Glu	Leu Ile Arg
210	215	220
Asn Ile Tyr Asn Ser Phe His	Lys Leu Arg Asp Arg Ala	Glu Arg Ile
225	230	235
Ala Ser Arg Ala Ile Asp Asn	Ala Ala Asp Leu Leu Ile	Phe Gly Lys
245	250	255
Glu Leu Ser Ala Ile Gly Ser	Asp Thr Thr Pro Leu Pro	Ser Trp Ala
260	265	270
Ala Leu Asn Ser Ser Thr Trp	Gly Ser Leu Lys Gln Ala	Leu Lys Gly
275	280	285
Leu Ser Val Glu Phe Ala Leu	Leu Ala Asp Lys Ala Ala	Gln Gln Gly
290	295	300
Lys Gln Glu Glu Asn Asp Val	Val Glu Lys Leu Asn Leu	Phe Leu Asp
305	310	315
Leu Leu Gln Ser Tyr Lys Asp	Leu Cys Glu Arg His Glu	Lys Gly Val
325	330	335
Leu His Lys His Gln Arg Ala	Leu His Lys Tyr Ser Leu	Met Lys Arg
340	345	350
Gln Met Met Ser Ala Thr Ala	Gln Asn Arg Glu Pro Glu	Ser Val Glu
355	360	365
Gln Leu Glu Ser Arg Ile Val	Glu Gln Glu Asn Ala Ile	Gln Thr Met
370	375	380
Glu Leu Arg Asn Tyr Phe Ser	Leu Tyr Cys Leu His Gln	Glu Thr Gln
385	390	395
Leu Ile His Val Tyr Leu Pro	Leu Thr Ser His Ile Leu	Arg Ala Phe
405	410	415
Val Asn Ser Gln Ile Gln Gly	His Lys Glu Met Ser Lys	Val Trp Asn
420	425	430
Asp Leu Arg Pro Lys Leu Ser	Cys Leu Phe Ala Gly Pro	His Ser Thr
435	440	445
Leu Thr Pro Pro Cys Ser Pro	Pro Glu Asp Gly Leu Cys	Pro His
450	455	460

<210> 5813

<211> 2991

<212> DNA

<213> Homo sapiens

<400> 5813

nttgatgtat gtaattgatc actttatttaa ctggcaaaaa gaagccttgt tgaggtgata
60
aaccgaactt cattacatcc tgtatgtcga gagcaaacac attgggacgt ggctgatggg
120

ttcccatttc aaggctgatt ctgatgatga taatgtttta gtagcattga ttgttctcta
180
attgaatttt tctttcttta ggctcttctt gaagagctga aagctgccta ccggaggctc
240
tgtatgctct accatccaga caagcacaga gaccagagc tcaagtcaca ggcggaacga
300
ctgtttaacc ttgttcacca ggcttatgaa gtgcttagtg acccccaaac cagggccatc
360
tatgatatat atgggaagag aggactggaa atggaaggat gggaggttgt ggaaaggagg
420
agaacccctg ctgaaattcg agaggagttt gagcggctgc agagagagag agaagagagg
480
agattgcagc agcgaaccaa tccaagctt ttgacaaca aactgtgctc tgcagttttc
540
atcccgctgga atccgacccg gcctgaccac tgccttagct cggaacctag acaagaacac
600
cgtgggctac ctgcagtggc gatgggggat ccagtcagcc atgaacacta gcatcgctcc
660
agacactaaa accagccact tctgtgtggc cctgcagctg ggaatccctc actcctttgc
720
actgatcagc tatcagcaca aattccaaga tgacgatcag actcgtgtga aaggatccct
780
gcagagcagg cttctttggg acggtggtgg agtacggagc tgagaggaag atctccaggc
840
acagcgtttt ggggtgcagct gtcagcgttg gagttccaca gggcgtttct ctcaaagtca
900
agctcaacag ggccagtcag acatacttct tccctattca cttgacggac cagcttctgc
960
ccagcgccat gttctatgcc accgtggggc ctctagtggc ctactttgcc atgcaccgtc
1020
tgatcatcaa accatacctc agggctcaga aagagaagga attggagaag cagaggggaa
1080
gcgcccacc cgtatgtgtg cagaagaagc aagaggcgga gtccgctgtc cggctgatgc
1140
aggaatctgt ccgaaggata attgaggcag aagagtccag aatgggcctc atcatcgta
1200
atgcctggta cgggaagttt gtcaatgaca agagcaggaa gagcgagaag gtgaagggtga
1260
ttgacgtgac tgtgcccctg cagtgcctgg tgaaggactc gaagctcatc ctcacggagg
1320
cctccaaggc tgggctgcct ggcttttatg acccgtgtgt gggggaagag aagaacctga
1380
aagtgtctta tcagttccgg ggcgtcctgc atcaggtgat ggtgctggac agtgaggccc
1440
tccggatacc aaagcagtc caccagatcg atacagatgg ataaactgcc aagaaccaga
1500
tttttaaaag gccgcaaaaa atcttttctt gggagtctac aaatttggaa atgaaaaaac
1560
ccagacatca gatgttttta ttttatatta ttattataga aggtggtacc attatcaatt
1620
atgtgaaggg acatgcagac accccagctt ttgaggggtc tgggggtagg actgaggcag
1680
cccactggg aaccagactg cagcctggcc catggctgtt ttcccaagga tcagttcctg
1740

gaggggaaggg ctctggccct gactccgctg tgtcccagagc acacgtgctg accgcagccc
 1800
 gccgccctgt agttcttggc tgggtctgga ggtgtctgtg gagcaccctg ccctcaccac
 1860
 aggagcgtga gccacttctg cagtccacgc tgaacatggg aaacaacctg aaaagcagggc
 1920
 aggcctcccg gtcagggagc ctctgctgtg ctggcttccc atgaccacct cctcttgctg
 1980
 aaatattact gcttgaatct ggagcagatt gcgggtttat aaaactgctt tttatctgag
 2040
 aacaaaaggg tttggaaatt agtcgtcttt tttccccact ccagagctg ctcaagtcat
 2100
 tccaccggcc ccctcggtt gggacagggg agtgtaactc ccgatcccag ggcctagccc
 2160
 tgacacaggt ggcttcccg atccccgtgg gaaaacgccc tgccaccagc gggcttgagc
 2220
 tggcctgtgt ccctccaccg cctgcaccac ccacctccag agtgacgtgc tgggcaaggg
 2280
 cagctcaaga ggacaggacc aggcgcttgg caagacatca gacacaccca acccaaaggc
 2340
 gtggacccca ggccccggcc gtggtaccca gcaggtggca ctgcagctcc ccgctcctgc
 2400
 aggtccagcg tcctcacagg aacaccaggg cctgtgctcc ggagccttcc ttcagacct
 2460
 tcctccacgt gccacttgg gatgcagaat gcagcggagc taggaccccc tccacggcct
 2520
 ggacctcggc tgcagtaaag ttacgtgagg cctgtctctc ggggcctgga agtggcagcc
 2580
 atcagttgct cttgctgacc cctcgagca agcgcgcac aggtggtggc tgagacagct
 2640
 ggcgcggggg gccccaagct gcgcggcct ccagcccacc cacagctgtt gctgaagtca
 2700
 ggctccctc cccagcactg gtatctgagt aacggctaag aacctcctc ctctggtttt
 2760
 gaaaagcagt tcgggttgct caattctgta acattcatct ccatttttta aaaaggtttc
 2820
 tctgacggcc ccacggcccg agccgcgggtg agcgtcgtgt tgcattgagc tgggccccgg
 2880
 gcttcccgtg cgcctctgcc gcaggtgctt ctgggcaccc atcctctgcg tttcatttgc
 2940
 agtcgactgt acagaaggca ctcaccacaa taaacctttc ctgaaagcag a
 2991

<210> 5814

<211> 149

<212> PRT

<213> Homo sapiens

<400> 5814

Ala	Ser	Ser	Glu	Glu	Leu	Lys	Ala	Ala	Tyr	Arg	Arg	Leu	Cys	Met	Leu
1				5					10				15		
Tyr	His	Pro	Asp	Lys	His	Arg	Asp	Pro	Glu	Leu	Lys	Ser	Gln	Ala	Glu
			20					25				30			
Arg	Leu	Phe	Asn	Leu	Val	His	Gln	Ala	Tyr	Glu	Val	Leu	Ser	Asp	Pro

```

      35              40              45
Gln Thr Arg Ala Ile Tyr Asp Ile Tyr Gly Lys Arg Gly Leu Glu Met
      50              55              60
Glu Gly Trp Glu Val Val Glu Arg Arg Arg Thr Pro Ala Glu Ile Arg
65      70      75      80
Glu Glu Phe Glu Arg Leu Gln Arg Glu Arg Glu Glu Arg Arg Leu Gln
      85              90              95
Gln Arg Thr Asn Pro Lys Leu Cys Asp Asn Lys Leu Cys Ser Ala Val
      100             105             110
Phe Ile Pro Trp Asn Pro Thr Arg Pro Asp His Cys Pro Ser Ser Glu
      115             120             125
Pro Arg Gln Glu His Arg Gly Leu Pro Ala Val Ala Met Gly Tyr Pro
      130             135             140
Val Ser His Glu His
145

```

<210> 5815

<211> 590

<212> DNA

<213> Homo sapiens

<400> 5815

```

ttcatccagg ctgctcttgg ggatcagcca cgtgatatcc tttgtggggc agctgatgaa
60
gttctagctg ttctaaagaa tgaaaagctg cgggacaagg aaaggcgaaa ggagattgac
120
ctgctgctgg gtcaaacaga tgataccaga taccatgtgc tagtgaacct gggcctcccg
180
agtcctcttta gttttgggct tgtagatgat gccaccatc tcatcaatgc cctccgacag
240
cagagtataa cccttcatct tgttgatgtc atgcgggtcc tcatcacgct ttcttcgctt
300
ggctcttctt tctctctgca tctgcggttt ggtccgttga gccttgcttc ccatacgggt
360
gccctccagc ttcccaacaa gggacagcac ctctcctgtg ggttcatccc ggcgggtccg
420
gtcaatgaga gaacggtcag cttggagcac aagattcgag ttcgccttgt actcgtattg
480
cagactacgg gcggttacat ccgccatggc cgcggctgct cggaggcttc agaccaccac
540
gcctccatac cgcaagctgc aaacggccgc agatctctgc tctggcgcc
590

```

<210> 5816

<211> 196

<212> PRT

<213> Homo sapiens

<400> 5816

```

Phe Ile Gln Ala Ala Leu Gly Asp Gln Pro Arg Asp Ile Leu Cys Gly
1      5      10      15
Ala Ala Asp Glu Val Leu Ala Val Leu Lys Asn Glu Lys Leu Arg Asp
20      25      30
Lys Glu Arg Arg Lys Glu Ile Asp Leu Leu Leu Gly Gln Thr Asp Asp

```

```

          35          40          45
Thr Arg Tyr His Val Leu Val Asn Leu Gly Leu Pro Ser Leu Phe Ser
  50          55          60
Phe Gly Leu Val Asp Asp Ala His His Leu Ile Asn Ala Leu Arg Gln
  65          70          75          80
Gln Ser Ile Thr Leu His Leu Val Asp Val Met Pro Val Leu Ile Thr
          85          90          95
Leu Ser Ser Leu Gly Ser Ser Phe Leu Leu His Leu Arg Phe Gly Pro
          100          105          110
Leu Ser Leu Val Ser His Thr Gly Ala Leu Gln Leu Pro Asn Lys Gly
          115          120          125
Gln His Leu Ser Cys Gly Phe Ile Pro Ala Gly Pro Val Asn Glu Arg
          130          135          140
Thr Val Ser Leu Glu His Lys Ile Arg Val Arg Leu Val Leu Val Leu
          145          150          155          160
Gln Thr Thr Gly Gly Tyr Ile Arg His Gly Arg Gly Cys Ser Glu Ala
          165          170          175
Ser Asp His His Ala Ser Ile Pro Gln Ala Ala Asn Gly Arg Arg Ser
          180          185          190
Leu Leu Leu Ala
          195

```

<210> 5817

<211> 648

<212> DNA

<213> Homo sapiens

<400> 5817

```

cccaaagatg cagaactaca aagcaagccc caagatggag tgagcaacaa caatgaaatt
  60
cagaagaaag ccaccatggg gcagttacag aacaaggaga acaataacac caaggacagc
  120
cctagtaggc agtgctcctg ggacaagtct gagtcacccc agagaagcag catgaacaat
  180
ggatccccc cagctctatc aggcagcaaa accaacagcc caaagaacag tgttcacaag
  240
ctagatgtgt ctagaagccc ccctctcatg gtcaaaaaga acccagcctt taataagggt
  300
agtgggatag ttaccaatgg gtccttcagc agcagtaatg cagaaggctt tgagaaaacc
  360
caaaccaccc ccaatgggag cctacaggcc agaaggagct cttactgaa ggtatctggt
  420
accaaaatgg gcacgcacag tgtacagaat ggaacggtgc gcatgggcat tttgaacagc
  480
gacacactcg ggaacccac aaatgttcga aacatgagct ggctgccaaa tggctatgtg
  540
accctgaggg ataacaagca gaaagaacaa gctggagagt taggccagca caacagactg
  600
tcacctatga taatgtccat cacagttctc catgatgaac ttgatgac
  648

```

<210> 5818

<211> 191

<212> PRT

<213> Homo sapiens

<400> 5818

```

Met Gly Gln Leu Gln Asn Lys Glu Asn Asn Asn Thr Lys Asp Ser Pro
 1           5           10           15
Ser Arg Gln Cys Ser Trp Asp Lys Ser Glu Ser Pro Gln Arg Ser Ser
          20           25           30
Met Asn Asn Gly Ser Pro Thr Ala Leu Ser Gly Ser Lys Thr Asn Ser
          35           40           45
Pro Lys Asn Ser Val His Lys Leu Asp Val Ser Arg Ser Pro Pro Leu
          50           55           60
Met Val Lys Lys Asn Pro Ala Phe Asn Lys Gly Ser Gly Ile Val Thr
65           70           75           80
Asn Gly Ser Phe Ser Ser Ser Asn Ala Glu Gly Leu Glu Lys Thr Gln
          85           90           95
Thr Thr Pro Asn Gly Ser Leu Gln Ala Arg Arg Ser Ser Ser Leu Lys
          100          105          110
Val Ser Gly Thr Lys Met Gly Thr His Ser Val Gln Asn Gly Thr Val
          115          120          125
Arg Met Gly Ile Leu Asn Ser Asp Thr Leu Gly Asn Pro Thr Asn Val
          130          135          140
Arg Asn Met Ser Trp Leu Pro Asn Gly Tyr Val Thr Leu Arg Asp Asn
145          150          155          160
Lys Gln Lys Glu Gln Ala Gly Glu Leu Gly Gln His Asn Arg Leu Ser
          165          170          175
Pro Met Ile Met Ser Ile Thr Val Leu His Asp Glu Leu Asp Asp
          180          185          190

```

<210> 5819

<211> 1652

<212> DNA

<213> Homo sapiens

<400> 5819

```

gatattcttt tggaaacgta atattggcct tggggctctc cagcccttg ggacttccaa
60
tgggatctta gaagcagccg aagcagcgtg agggcgggccg agggccagcc acgatttgaa
120
cgctctgcct tgcagctctt ctggaccgag gagcccaaag ccctaccctc accattcacc
180
aggtcctgtg ggaagagcag cgtggagggt ggctgagggt agaaggtgca gagcgtggaa
240
gaagattgtg agctgagtat tggacatctg ttcttgaata gtccctgggc ctgccatagg
300
aaaggaagtt ctccagggtt acagttctta tccgcgtgaa tacacatggc tctgttacga
360
aaaattaatc aggtgctgct gttccttctg atcgtgaccc tctgtgtgat tctgtataag
420
aaagttcata aggggactgt gccaagaat gacgcagatg atgaatccga gactcctgaa
480
gaactggaag aagagattcc tgtggtgatt tgtgctgcag caggaggat gggtgccact
540
atggctgcca tcaatagcat ctacagcaac cctgacgcca acatcttggt ctatgtagtg
600

```

ggactccgga atactctgac tcgaatacga aaatggattg aacattccaa actgagagaa
 660
 ataaacttta aaatcgtgga attcaaccg atggtcctca aagggaagat cagaccagac
 720
 tcatcgaggc ctgaattgct ccagcctctg aactttgttc gattttatct ccctctactt
 780
 atccacqaac acgagaaagt catctatttg gacgatgatg taattgtaca aggtgatatc
 840
 caagaactgt atgacaccac cttggccctg ggccacgcgg cggctttctc agatgactgc
 900
 gattttgccct ctgctcagga cataaacaga ctcgtgggac ttcagaacac atatatgggc
 960
 tatctggact accggaagaa ggccatcaag gaccttggca tcagccccag cacctgctct
 1020
 ttcaatcctg gtgtgattgt tgccaacatg acagaatgga agcaccagcg catcaccaag
 1080
 caattggaga aatggatgca aaagaatgtg gagtacgtga aggcttctct accatttttt
 1140
 ccatgcttgg aaacaaaatc attcaattaa tttccacac atagtccaag ggttagaaat
 1200
 atttcacagt catctcaggt cagattttct tacagaggca atgttaagaa agaaaagggg
 1260
 gcagtcaatt aaaacctttc ctcaaaagat ataaatcaga ggaatcaaga tcctgtggag
 1320
 cgaggagtcc ctgattatac attttcctag taagctgttg aaaaatgtga cttgaatctt
 1380
 ttccacaaa caatcttcat ttatcttagt tgagtttccc ctctaacat agattttttt
 1440
 attaaggatt attatataaa gtcaattttg ctttttaagg tttattttta taatttataa
 1500
 tttttcgta tcggagtttt aaaatagaga agataaaaat aagtctaata caagcactat
 1560
 tatcccatca ttgtattgcc tagcagtctt gtgtatctgg atattttaat accatcataa
 1620
 ccttgaattt gcaagtaaag ttattctaaa ta
 1652

<210> 5820

<211> 274

<212> PRT

<213> Homo sapiens

<400> 5820

Met	Ala	Leu	Leu	Arg	Lys	Ile	Asn	Gln	Val	Leu	Leu	Phe	Leu	Leu	Ile
1				5				10					15		
Val	Thr	Leu	Cys	Val	Ile	Leu	Tyr	Lys	Lys	Val	His	Lys	Gly	Thr	Val
			20					25					30		
Pro	Lys	Asn	Asp	Ala	Asp	Asp	Glu	Ser	Glu	Thr	Pro	Glu	Glu	Leu	Glu
		35					40					45			
Glu	Glu	Ile	Pro	Val	Val	Ile	Cys	Ala	Ala	Ala	Gly	Arg	Met	Gly	Ala
		50				55					60				
Thr	Met	Ala	Ala	Ile	Asn	Ser	Ile	Tyr	Ser	Asn	Pro	Asp	Ala	Asn	Ile
65					70					75				80	
Leu	Phe	Tyr	Val	Val	Gly	Leu	Arg	Asn	Thr	Leu	Thr	Arg	Ile	Arg	Lys

85										90				95			
Trp	Ile	Glu	His	Ser	Lys	Leu	Arg	Glu	Ile	Asn	Phe	Lys	Ile	Val	Glu		
100										105				110			
Phe	Asn	Pro	Met	Val	Leu	Lys	Gly	Lys	Ile	Arg	Pro	Asp	Ser	Ser	Arg		
115										120				125			
Pro	Glu	Leu	Leu	Gln	Pro	Leu	Asn	Phe	Val	Arg	Phe	Tyr	Leu	Pro	Leu		
130										135				140			
Leu	Ile	His	Gln	His	Glu	Lys	Val	Ile	Tyr	Leu	Asp	Asp	Asp	Val	Ile		
145										150				155			
Val	Gln	Gly	Asp	Ile	Gln	Glu	Leu	Tyr	Asp	Thr	Thr	Leu	Ala	Leu	Gly		
165										170				175			
His	Ala	Ala	Ala	Phe	Ser	Asp	Asp	Cys	Asp	Leu	Pro	Ser	Ala	Gln	Asp		
180										185				190			
Ile	Asn	Arg	Leu	Val	Gly	Leu	Gln	Asn	Thr	Tyr	Met	Gly	Tyr	Leu	Asp		
195										200				205			
Tyr	Arg	Lys	Lys	Ala	Ile	Lys	Asp	Leu	Gly	Ile	Ser	Pro	Ser	Thr	Cys		
210										215				220			
Ser	Phe	Asn	Pro	Gly	Val	Ile	Val	Ala	Asn	Met	Thr	Glu	Trp	Lys	His		
225										230				235			
Gln	Arg	Ile	Thr	Lys	Gln	Leu	Glu	Lys	Trp	Met	Gln	Lys	Asn	Val	Glu		
245										250				255			
Tyr	Val	Lys	Ala	Ser	Leu	Pro	Phe	Phe	Pro	Cys	Leu	Glu	Thr	Lys	Ser		
260										265				270			
Phe Asn																	

<210> 5821

<211> 3292

<212> DNA

<213> Homo sapiens

<400> 5821

```

ngcctgtaac  cccaacactt  tgggagggcca  cgccaggagg  atcacttgag  gccaggagtt
60
cgagaccagc  ctggtcaaca  tagcgagact  tcgtcactag  aaaaaattta  aaaaattttt
120
taaaaaggaa  aaaatataac  ttagagcccc  ctatgaaaaa  ctaaattagc  atcatgacag
180
gatacacttt  ggggagtgaa  atttcacagt  acctttattt  aattccaagc  catagagcct
240
ggtaatattt  ttctctttat  cagctgtggc  actaaaataa  cagtggattt  tttccctcta
300
gacattcttc  ttttggccga  tgaaaaatth  gacttcgata  tttcattgtc  ttcttcgagt
360
gcaaatgaag  atgatgaagt  cttcttcgga  ccctttggac  ataaagaaag  atgtattgct
420
gccagcttgg  aattaaataa  tccggttccc  gaacagcctc  cgttgcccac  atctgagagt
480
ccctttgcct  ggagccctct  ggccggggag  aagttcgtgg  aggtgtacaa  agaagctcac
540
ttactggctt  tacacattga  gagcagcagc  cggaaccagg  cagcccaagc  tgccaagcct
600
gaagaccctc  ggagccaggg  cgtggaaaga  ttcatacagg  agtcaaaatt  aaaaataaac
660

```

ctcttttgaga aagaaaagga aatgaagaaa agccccacgt ctcttaaaag ggagacatac
720
tacctgtcag acagcccctt gctggggccc cctgtgggtg agcctcggct cttggcctcc
780
tccccggccc tgcccagctc tggtgcccag gcccgcctca cccgggcgcc ggggcctccg
840
cactctgctc atgctttgcc cagggaatca tgactgctc atgctgcaag tcaggcagcg
900
actcagagga agcccgggac caaattgctg ctgcctcgag cggcctctgt tagaggaaga
960
agcatccctg gggctgcgga gaagcccaag aaagagattc cagctagtcc ttccaggaca
1020
aaaatcccag ctgagaagga atcccaccgg gatgttctcc ctgacaaacc tgccccgggt
1080
gctgtcaatg tgccggccgc cggaagccac ttggggccagg gcaagcgggc gatccctgtt
1140
ccaaacaagt tggggctgaa gaagaccctg ttaaaagcac ccggctctac cagcaatctc
1200
gcaaggaagt cctcctcggg gcctgtttgg agcggggcat ccagtgcgtg cacatcccca
1260
gcagtgggca aagctaaatc aagtgaattt gcaagtattc ctgcaaatac ctccccggct
1320
ctgtcaaaca tcagcaagtc aggcagaatg ggaccgcga tgctgcggcc agctctgcct
1380
gcaggccctg tgggggcac ctcctggcag gccaaagcggg tcgatgttcc tgagctggca
1440
gcgagcagc tcacggcacc cccctcagca tccccaccc aaccacagac tccggaaggt
1500
ggcgccagt ggctgaactc cagttgcgtg tggtcagaat cttctcaatt gaataagact
1560
agaagtatca gacggcgaga ttctgtcta aattccaaga caaagggtat gcctactcct
1620
acaaatcaat ttaaaattcc taagttttct attgggtgact ccccgacag ctcaacacca
1680
aagctttcgc gggcacagcg gccgcagtcg tgcacgtcag ttggcagggc cactgtccac
1740
agcaccgccg ttagacgctc atctgggcca gcaccacaaa gcctgctgag cgcattggct
1800
gtgtcagcct tgccacacc cgcagccgg cgctgctctg gccttcacc gatgaccccc
1860
aaaacgatgc ccagggccgt gggctctccc ctgtgtgtgc cagctcggag acgttcctct
1920
gagccccgca agaactctgc aatgagaact gaaccaacaa gggagagcaa cagaaagaca
1980
gattccaggc tgggtgatgt gtcccctgac aggggttctc ctccttccc tgtgcctcag
2040
gcacttaact tttctccaga ggaaagcgat tctactttct ccaaaagtac tgccacagaa
2100
gtagctcggg aggaagccaa gccgggtgga gatgcagccc ctagtgaggc tcttcttgta
2160
gatataaac tggaaccact cgcggctact ccagatgctg caagccagcc cctcattgac
2220
cttcctctca tcgacttctg cgatacccca gaagcacacg tggctgtagg atctgaaagc
2280

aggcctctga tcgacctcat gacaaacact ccagacatga ataaaaatgt ggccaaacct
 2340
 tcaccgggtgg tgggacagct catagacctg agtccccctc tgatccagct gagccctgag
 2400
 gctgacaagg agaacgtgga ttccccactc ctcaagttct aagccgaacc aaatcctttg
 2460
 ccttgaaaga acagccctaa agtggttttc aaccctcaga aacaagcttt aggctggtcg
 2520
 cagtggctta cacttgtaac cctagaactt gggaggctga ggtgggcgga ttacttgagc
 2580
 ccaggagttc gggaccagcc tgggaaatat agtgaaactc ctgtccctac aaaaaatata
 2640
 aaaattagcc ggggtgtgga gtgcgtgcct gtagtcccag ctacttggga ggctgaagtg
 2700
 ggaggatggc ctgagctcaa ggagatgcag gctgcagtgg gctgtgattg tgccactgca
 2760
 ctccagcctg ggcaccaatg tgagaacctg tcttgaaaa aaaaaaaaag aaacatgttt
 2820
 tagtagaagt tttatttgaa aaagaaaaat aagcataaat atattcccag tgctggagag
 2880
 ggtgggctga gggactgggg ccagcacgga ccaccaagg cctctgcttc ccgccgccac
 2940
 cctcctcgct gccattctct gggctggaat gtgaagcctc agtcactcta aatgaagaat
 3000
 tttcttttga atgttttgta tgtaaaatag caagtggcta tttttaaagt taagtttgta
 3060
 taaatagtta gatattctag atttacatta aattgtaaaa taaatggact tattgaagca
 3120
 tatcttgatt ttttaagctta tcttgatttt caaacatgca tagctatttt tatcactcta
 3180
 atcagtaagg ctactatcta gactcgaatg ctttcataca agtgattttc aaaaattagt
 3240
 caatataaat tgatgtcagt gcaggcccg cccgccccca gatacactag tt
 3292

<210> 5822

<211> 712

<212> PRT

<213> Homo sapiens

<400> 5822

Ile	Leu	Leu	Leu	Ala	Asp	Glu	Lys	Phe	Asp	Phe	Asp	Leu	Ser	Leu	Ser
1				5				10						15	
Ser	Ser	Ser	Ala	Asn	Glu	Asp	Asp	Glu	Val	Phe	Phe	Gly	Pro	Phe	Gly
			20					25					30		
His	Lys	Glu	Arg	Cys	Ile	Ala	Ala	Ser	Leu	Glu	Leu	Asn	Asn	Pro	Val
		35				40					45				
Pro	Glu	Gln	Pro	Pro	Leu	Pro	Thr	Ser	Glu	Ser	Pro	Phe	Ala	Trp	Ser
	50				55						60				
Pro	Leu	Ala	Gly	Glu	Lys	Phe	Val	Glu	Val	Tyr	Lys	Glu	Ala	His	Leu
65				70				75						80	
Leu	Ala	Leu	His	Ile	Glu	Ser	Ser	Ser	Arg	Asn	Gln	Ala	Ala	Gln	Ala
			85					90						95	
Ala	Lys	Pro	Glu	Asp	Pro	Arg	Ser	Gln	Gly	Val	Glu	Arg	Phe	Ile	Gln

										100					105					110					
Glu	Ser	Lys	Leu	Lys	Ile	Asn	Leu	Phe	Glu	Lys	Glu	Lys	Glu	Met	Lys										
										115					120					125					
Lys	Ser	Pro	Thr	Ser	Leu	Lys	Arg	Glu	Thr	Tyr	Tyr	Leu	Ser	Asp	Ser										
										130					135					140					
Pro	Leu	Leu	Gly	Pro	Pro	Val	Gly	Glu	Pro	Arg	Leu	Leu	Ala	Ser	Ser										
										145					150					155					
Pro	Ala	Leu	Pro	Ser	Ser	Gly	Ala	Gln	Ala	Arg	Leu	Thr	Arg	Ala	Pro										
										165					170					175					
Gly	Pro	Pro	His	Ser	Ala	His	Ala	Leu	Pro	Arg	Glu	Ser	Cys	Thr	Ala										
										180					185					190					
His	Ala	Ala	Ser	Gln	Ala	Ala	Thr	Gln	Arg	Lys	Pro	Gly	Thr	Lys	Leu										
										195					200					205					
Leu	Leu	Pro	Arg	Ala	Ala	Ser	Val	Arg	Gly	Arg	Ser	Ile	Pro	Gly	Ala										
										210					215					220					
Ala	Glu	Lys	Pro	Lys	Lys	Glu	Ile	Pro	Ala	Ser	Pro	Ser	Arg	Thr	Lys										
										225					230					235					
Ile	Pro	Ala	Glu	Lys	Glu	Ser	His	Arg	Asp	Val	Leu	Pro	Asp	Lys	Pro										
										245					250					255					
Ala	Pro	Gly	Ala	Val	Asn	Val	Pro	Ala	Ala	Gly	Ser	His	Leu	Gly	Gln										
										260					265					270					
Gly	Lys	Arg	Ala	Ile	Pro	Val	Pro	Asn	Lys	Leu	Gly	Leu	Lys	Lys	Thr										
										275					280					285					
Leu	Leu	Lys	Ala	Pro	Gly	Ser	Thr	Ser	Asn	Leu	Ala	Arg	Lys	Ser	Ser										
										290					295					300					
Ser	Gly	Pro	Val	Trp	Ser	Gly	Ala	Ser	Ser	Ala	Cys	Thr	Ser	Pro	Ala										
										305					310					315					
Val	Gly	Lys	Ala	Lys	Ser	Ser	Glu	Phe	Ala	Ser	Ile	Pro	Ala	Asn	Ser										
										325					330					335					
Ser	Arg	Pro	Leu	Ser	Asn	Ile	Ser	Lys	Ser	Gly	Arg	Met	Gly	Pro	Ala										
										340					345					350					
Met	Leu	Arg	Pro	Ala	Leu	Pro	Ala	Gly	Pro	Val	Gly	Ala	Ser	Ser	Trp										
										355					360					365					
Gln	Ala	Lys	Arg	Val	Asp	Val	Ser	Glu	Leu	Ala	Ala	Glu	Gln	Leu	Thr										
										370					375					380					
Ala	Pro	Pro	Ser	Ala	Ser	Pro	Thr	Gln	Pro	Gln	Thr	Pro	Glu	Gly	Gly										
										385					390					395					
Gly	Gln	Trp	Leu	Asn	Ser	Ser	Cys	Ala	Trp	Ser	Glu	Ser	Ser	Gln	Leu										
										405					410					415					
Asn	Lys	Thr	Arg	Ser	Ile	Arg	Arg	Arg	Asp	Ser	Cys	Leu	Asn	Ser	Lys										
										420					425					430					
Thr	Lys	Val	Met	Pro	Thr	Pro	Thr	Asn	Gln	Phe	Lys	Ile	Pro	Lys	Phe										
										435					440					445					
Ser	Ile	Gly	Asp	Ser	Pro	Asp	Ser	Ser	Thr	Pro	Lys	Leu	Ser	Arg	Ala										
										450					455					460					
Gln	Arg	Pro	Gln	Ser	Cys	Thr	Ser	Val	Gly	Arg	Val	Thr	Val	His	Ser										
										465					470					475					
Thr	Pro	Val	Arg	Arg	Ser	Ser	Gly	Pro	Ala	Pro	Gln	Ser	Leu	Leu	Ser										
										485					490					495					
Ala	Trp	Arg	Val	Ser	Ala	Leu	Pro	Thr	Pro	Ala	Ser	Arg	Arg	Cys	Ser										
										500					505					510					
Gly	Leu	Pro	Pro	Met	Thr	Pro	Lys	Thr	Met	Pro	Arg	Ala	Val	Gly	Ser										
										515					520					525					
Pro	Leu	Cys	Val	Pro	Ala	Arg	Arg	Arg	Ser	Ser	Glu	Pro	Arg	Lys	Asn										

530	535	540
Ser Ala Met Arg Thr Glu Pro Thr Arg Glu Ser Asn Arg Lys Thr Asp		
545	550	555
Ser Arg Leu Val Asp Val Ser Pro Asp Arg Gly Ser Pro Pro Ser Arg		
	565	570
Val Pro Gln Ala Leu Asn Phe Ser Pro Glu Glu Ser Asp Ser Thr Phe		
	580	585
Ser Lys Ser Thr Ala Thr Glu Val Ala Arg Glu Glu Ala Lys Pro Gly		
	595	600
Gly Asp Ala Ala Pro Ser Glu Ala Leu Leu Val Asp Ile Lys Leu Glu		
	610	615
Pro Leu Ala Val Thr Pro Asp Ala Ala Ser Gln Pro Leu Ile Asp Leu		
	625	630
Pro Leu Ile Asp Phe Cys Asp Thr Pro Glu Ala His Val Ala Val Gly		
	645	650
Ser Glu Ser Arg Pro Leu Ile Asp Leu Met Thr Asn Thr Pro Asp Met		
	660	665
Asn Lys Asn Val Ala Lys Pro Ser Pro Val Val Gly Gln Leu Ile Asp		
	675	680
Leu Ser Ser Pro Leu Ile Gln Leu Ser Pro Glu Ala Asp Lys Glu Asn		
	690	695
Val Asp Ser Pro Leu Leu Lys Phe		700
705	710	

<210> 5823

<211> 2585

<212> DNA

<213> Homo sapiens

<400> 5823

```

nggggttctc caaaaagtgt gttagtctcc ggtcacctga gctccgggtg acgcggctgc
60
ggtagctgcg gatacaagcc ttccgcggtt cctgcctggc gaccccgacc tcctcctgct
120
gtctctccgc tccgccaccc cgaaccgcc aaggctcctgt ccttttctc ctgtcctttg
180
ccagcggttg gccggaccgg gccgagccgg gccgcccggg cgcagtcttt aaccatggcg
240
tccctcttca agaagaaaac cgtggatgat gtaataaagg aacagaatcg agagttacga
300
ggtacacaga gggctataat cagagatcga gcagctttag agaaacaaga aaaacagctg
360
gaattagaaa ttaagaaaat ggccaagatt ggtaataagg aagcttgcaa agtttttagcc
420
aaacaacttg tgcattctacg gaaacagaag acgagaactt ttgctgtaag ttcaaaagtt
480
acttctatgt ctacacaaac aaaagtgatg aattcccaa tgaagatggc tggagcaatg
540
tctaccacag caaaaacaat gcaggcagtt aacaagaaga tggatccaca aaagacatta
600
caacaatgc agaatttcca gaaggaaaac atgaaaatgg aatgactga agaaatgatc
660
aatgatacac ttgatgacat ctttgacggt tctgatgacg aagaagaaag ccaggatatt
720

```

gtgaatcaag ttcttgatga aattggaatt gaaatttctg gaaagatggc caaagctcca
780
tcagctgctc gaagcttacc atctgcctct acttcaaagg ctacaatctc agatgaagag
840
attgaacggc aactcaaggc tttaggagta gattagtcaa aagaagtcac actattttgc
900
ttacttataa ttatgtagta taaaccaagc acagtgcaga tttcttttac aaaacacatg
960
tattttgcaa aaaaaaaaaa atggagacca tgagtgaaca gttgtttcct aacctatggc
1020
tattttagaat cttttgccaa agaatgacaa tgatgcaaaa atgggaacag tttggatttt
1080
aattagaact gtttatgagt gatgatgtgt aaaaagttga cttctctttt gcatggcaca
1140
gagaaattat attccttact tcatgtcagt ttatgttcta aatctttttc actgaatata
1200
aaaatcttgt taaatgccat taggcaccaa cttaaagagg gttgtaaaaa tattaagaat
1260
atatcgtaa ttctgtatct gttgcttgct ttttgtaagt gattatgtgt tatgaccata
1320
ggtggttaca gctgccaaat tatttttaaa tgggtcaaaa gaagagtgtc atttaaacat
1380
ctgtcttaaa caaaaactgt cataactttt cttttttttt tttccattag gagaacattc
1440
tagttggtaa atttcaaaat gtgcttgaca cctgccttaa atagcacaga cctattgtgc
1500
acatctttta attatttcag ctggcagaaa agaattacat ttaaaactga aatcaaggcc
1560
tcaatacaaa gattatcctg gctcttttct atctctgtgg gcctaattga aatatgtact
1620
cttatttttag acacgcctct gttaaaacag gtgttttaac atgttaaaac agaccagggt
1680
ttcttggtct cagacctatg atgacttgct cctttgatgt cactactgtg aattgaatat
1740
aattagtaaa aatagacgat gaataaataa cactttatag taagaaaaca atatattttg
1800
gccatctaaa aatgagaatt ataattatat gaattataat ttaaactgtt taatttttgt
1860
taatgtgtat attgaatctt ccaaattgaa gccattattc tcaattaagt actacaacta
1920
tgacaatgct tgacctacat ttctaaaata aaaattcaca ttttttgata aataaactac
1980
agttttacca gaaattacta tctaaatgtg tattagcagt attttttaag gtgaaattgc
2040
cttggtatct aatgaatgtg tagacagggg gataaaatga aggattgccg gactagttag
2100
aatagaattt aggattaggt tagttttgaa aaatgatgtt gtaatatatg ggttctaaca
2160
catcctacca taaaaactgg aggagatatg tgtaacctgg ttaatttggg atgggtggaca
2220
ttttgggcta atactgacaa aatacatctt aggactagta tacatgtgac acggattgtc
2280
aggaggaatg aaaaactaaa ctgtatagtt tatattccgt aaaccatttt ataatgttca
2340

aagattaggt tttgttattg atagtattaa atacacagtt tctcttaaca gtgatgggtg
 2400
 aaaacatttt accggattat ggaatgttta ccagaacatg ttttgattct tgaatgtaca
 2460
 taataatgcc atctaactta tttacgttct tgtttacatg tgggagcttt tgttttcaaa
 2520
 aattattttg ttaaaaaatc tcaataaaga tttattattg ttgttctttt ctataaaaaa
 2580
 aaaaa
 2585

<210> 5824
 <211> 213
 <212> PRT
 <213> Homo sapiens

<400> 5824
 Met Ala Ser Leu Phe Lys Lys Lys Thr Val Asp Asp Val Ile Lys Glu
 1 5 10 15
 Gln Asn Arg Glu Leu Arg Gly Thr Gln Arg Ala Ile Ile Arg Asp Arg
 20 25 30
 Ala Ala Leu Glu Lys Gln Glu Lys Gln Leu Glu Leu Glu Ile Lys Lys
 35 40 45
 Met Ala Lys Ile Gly Asn Lys Glu Ala Cys Lys Val Leu Ala Lys Gln
 50 55 60
 Leu Val His Leu Arg Lys Gln Lys Thr Arg Thr Phe Ala Val Ser Ser
 65 70 75 80
 Lys Val Thr Ser Met Ser Thr Gln Thr Lys Val Met Asn Ser Gln Met
 85 90 95
 Lys Met Ala Gly Ala Met Ser Thr Thr Ala Lys Thr Met Gln Ala Val
 100 105 110
 Asn Lys Lys Met Asp Pro Gln Lys Thr Leu Gln Thr Met Gln Asn Phe
 115 120 125
 Gln Lys Glu Asn Met Lys Met Glu Met Thr Glu Glu Met Ile Asn Asp
 130 135 140
 Thr Leu Asp Asp Ile Phe Asp Gly Ser Asp Asp Glu Glu Glu Ser Gln
 145 150 155 160
 Asp Ile Val Asn Gln Val Leu Asp Glu Ile Gly Ile Glu Ile Ser Gly
 165 170 175
 Lys Met Ala Lys Ala Pro Ser Ala Ala Arg Ser Leu Pro Ser Ala Ser
 180 185 190
 Thr Ser Lys Ala Thr Ile Ser Asp Glu Glu Ile Glu Arg Gln Leu Lys
 195 200 205
 Ala Leu Gly Val Asp
 210

<210> 5825
 <211> 1940
 <212> DNA
 <213> Homo sapiens

<400> 5825
 ctccgacgat ctctcagtga aggacgtcct taatgaggcc acttagcaca gtcaaggtag
 60

aaatacagac caaatgtcac ctctctgttc tgtcattctt ttatcactca gcagacagct
120
agtctgggcc aggctctacg ctggaacgag ggacacagga atgagggatt ttttcccacc
180
cccaggaagc acataggcac acagtctgtg cctccttagc actgtggcct ctgggttctc
240
atcagggcca gcaacctcac ctgcctcac ctgtccgtcc ttagaagggc atttgtacac
300
tctgaaaagc aacggctctc aggttccttc tttctggatt actaatctct tgattttgat
360
gtgttttcagc tggaaagggc taccctgca aaacatgtaa gatagtgtg aactccatag
420
aacagtacca agctcatgtc agcggcttca aacacaagaa ccagtcacca aaaacagtgg
480
catcatccct gggccagatt ccaatgcaaa ggcaacccat tcagaaagac tcaaccacct
540
tggaagacta gaggtgattc tgcccagcat cccatattgg gccagccatg agccagcttc
600
ccgtgactgc tcagcccttg gctccctctt gctcgttgtt ctcaccagga aagtacacgg
660
gcctgaggca ggattgggcc acagacagcc tctcattggt ccgggctaata tcaactcctgc
720
tgctccccct tggcaggggt cctgtaggtc atgacagggg aggcaagggt attgagagac
780
tcgggggtctc gcgggggtgg agtttggagg gtggctttcc ccatttccca acccctctgg
840
gccttaggtg ctgaggcccc tgccacctgt ctttctctta aaggctcagt ttggggcagt
900
tcttgcaact aaagagcaga gatctctctg ggccctagac atttccagca aaacctggaa
960
ctttcatgcc aaacctgggg cagggcagga aacagaggaa atggctgcaa catgggagct
1020
tggagctaata acgacactct gccttcccc agaagggtgca ggctttcctg agtcttagac
1080
cagatatggc cagttgcgca ggtttctgcc aactgtgaag tatcctcctg gagcagtgc
1140
acaatcttgg cggagcattg ctacccccgc tgccccctcc acagtctcctg aatgggtgcta
1200
aggatctgca gcagttggca acgagctggg gctgggggcg gcctccatgt ccaactgagat
1260
cataggacac tccaatgggg atgggacctt tccccctctc catcagaggt gctctgaccc
1320
taggttacac gggaaagtgc cccacatgca agtctccctg agggttctgc ccctaaaggc
1380
agactgcctc atgcccgtca gctgtgaggt tcattgctac cctcggccct actagccctc
1440
tcttccccct tgtgcagcgg accacttgcc cagtttctg tggtgctagc cttccccatc
1500
atccaccggg tgatttctgg gtcccaggga aagaaagaga gagctgatgc aggtttctac
1560
agtagggaac aggcgtttcc caggccccac acccagattt ctctatcttt gctgtgtttt
1620
atggcctggg actgagtgca cacggataga ttttccctg taaccttgag acgagaattc
1680

caaggagtgt caccatcaga ggcttctctt catttgtgtca aagaagcccc tagctgctct
 1740
 cgtggcctcc ttccccact ccctatccct tcacctgtga aatgcctttg ctttgcatat
 1800
 tgttgtgtgga tgttgtgtgtg tgttgtgtgtg tgttgtgtgtg tatgtgtgtg cttctgtgtg
 1860
 tgcctaatagc tctgtctctt ggctcactgaa gcatccaaat aaagaatttc cctcatgggc
 1920
 cagactaaaa aaaaaaaaaa
 1940

<210> 5826

<211> 88

<212> PRT

<213> Homo sapiens

<400> 5826

Val	His	Thr	Asp	Arg	Phe	Phe	Leu	Val	Thr	Leu	Arg	Arg	Glu	Phe	Gln
1				5					10				15		
Gly	Val	Ser	Pro	Ser	Glu	Ala	Ser	Leu	His	Cys	Val	Lys	Glu	Ala	Pro
			20					25				30			
Ser	Cys	Ser	Arg	Gly	Leu	Leu	Pro	Leu	Pro	Ile	Pro	Ser	Pro	Val	
		35					40			45					
Lys	Cys	Leu	Cys	Phe	Ala	Tyr	Cys	Val	Trp	Met	Cys	Val	Cys	Val	Cys
	50					55				60					
Val	Cys	Val	Cys	Val	Cys	Val	Cys	Phe	Cys	Val	Cys	Leu	Met	Leu	Cys
65					70					75				80	
Leu	Leu	Val	Thr	Glu	Ala	Ser	Lys								
							85								

<210> 5827

<211> 428

<212> DNA

<213> Homo sapiens

<400> 5827

tttttaggcaa cacttcgtat gttttaagag ctaaagcaac taagaacaca gtactgtgac
 60
 ccacactaag gaatccaggg aagagaagca ttgccttagg ggccacagca agccagagag
 120
 tccagattaa aagctccagc ttgggggcct gtttcaaata accaggtagg ttcagccacc
 180
 ccctggagac tcgaatagga agaatactga gatacaacat ttgggagaga gatgagaaag
 240
 aagcccagct ttataaagag ggggcgttcc cagttactta atctatgcct ggcccagaaa
 300
 aggtgaaaac atgaggtggg ggacatgaaa attgttaaat aaagtgaact gtgcagtaag
 360
 aatgagttgg gcgaggtgca ccagcagagg ggagggcaggt aggaaggagg aggcattgatg
 420
 aggggggag
 428

<210> 5828

<211> 106
 <212> PRT
 <213> Homo sapiens

<400> 5828
 Met Pro Pro Pro Ser Tyr Leu Pro Pro Leu Cys Trp Cys Thr Ser Pro
 1 5 10 15
 Asn Ser Phe Leu Leu His Ser Ser Leu Tyr Leu Thr Ile Phe Met Ser
 20 25 30
 Pro Thr Ser Cys Phe His Leu Phe Trp Ala Arg His Arg Leu Ser Asn
 35 40 45
 Trp Glu Arg Pro Leu Phe Ile Lys Leu Gly Phe Phe Leu Ile Ser Leu
 50 55 60
 Pro Asn Val Val Ser Gln Tyr Ser Ser Tyr Ser Ser Leu Gln Gly Val
 65 70 75 80
 Ala Glu Pro Thr Trp Ser Phe Glu Thr Gly Pro Gln Ala Gly Ala Phe
 85 90 95
 Asn Leu Asp Ser Leu Ala Cys Cys Asp Pro
 100 105

<210> 5829
 <211> 5747
 <212> DNA
 <213> Homo sapiens

<400> 5829
 nnggcacgag cggaggagga cgcgagcccc ttgcgggcgg tcatcacagc ccagcctcgg
 60
 ggctgccaca ggcggttgcg cctgtgcgcc ctcgggtcccc gcgtccactg agcgccgcgc
 120
 tcggggatgg ggcccggcgc gccggccccc ggcgcctggc ctcgtcacct gctgcgctgc
 180
 gtctctctcc tcgggtgcct gcacctcggc cgtcccggcg cccctgggga cgccgcctc
 240
 ccggaaccca acgtcttcct catcttcagc catggactgc agggctgcct ggaggcccag
 300
 ggcgggcagg tcagagtcac cccggcttgc aataccagcc tccctgccca gcgctggaag
 360
 tgggtctccc gaaaccggct attcaacctg ggtaccatgc agtgccctggg cacaggctgg
 420
 ccaggcacca acaccacggc ctccctgggc atgtatgagt gtgaccggga agcactgaat
 480
 ctctcgtggc attgtcgtac actgggtgac cagctgtcct tgctcctggg ggcccgccac
 540
 agcaacatat ccaagcctgg cacccttgag cgtgggtgacc agaccgcag tggccagtgg
 600
 cgcctctacg gcagcgagga ggacctatgt gctctgcctt accacgaggt ctacaccatc
 660
 cagggaaact cccacggaaa gccgtgcacc atcccccttca aatatgacaa ccagtgggtc
 720
 cacggctgca ccagcacggg ccgcgaggat ggtcacctgt ggtgtgccac caccaggac
 780
 tacggcaaag acgagcgctg gggcttctgc cccatcaaga gtaacgactg cgagaccttc
 840

tgggacaagg accagctgac tgacagctgc taccagttta acttccagtc cacgctgtcg
900
tggagggagg cctggggccag ctgagagcag caggggtgcg atctgctgag catcacggag
960
atccacgagc agacctacat caacggcctc ctactgggt acagctccac cctgtggatc
1020
ggcttgaatg acttggacac gagcggaggc tggcagtggc cggacaactc gcccctcaag
1080
tacctcaact gggagagtga ccagccggac aacccagtg aggagaactg tggagtgatc
1140
cgcactgagt cctcggggcg ctggcagaac cgtgactgca gcatcgcgct gccctatgtg
1200
tgcaagaaga agcccaacgc cacggccgag cccaccctc cagacagggt ggccaatgtg
1260
aaggtggagt gcgagccgag ctggcagccc ttccagggcc actgctaccg cctgcaggcc
1320
gagaagcgca gctggcagga gtccaagaag gcatgtctac ggggcggtgg cgacctggtc
1380
agcatccaca gcatggcgga gctggaattc atcaccaagc agatcaagca agagggtggag
1440
gagctgtgga tcggcctcaa cgatttgaaa ctgcagatga attttgagt gtctgacggg
1500
agccttgtga gcttcaccca ctggcacccc tttgagccca acaacttccg ggacagtctg
1560
gaggactgtg tcaccatctg gggcccggaa ggccgctgga acgacagtcc ctgtaaccag
1620
tccttgccat ccatctgcaa gaaggcaggc cagctgagcc agggggccgc cgaggaggac
1680
catggctgcc ggaaggggtg gacgtggcac agcccattct gctactggct gggagaagac
1740
caagtgcct acagtgaggc ccggcgctg tgactgacc atggctctca gctggtcacc
1800
atcaccaaca ggttcgagca ggccttcgtc agcagcctca tctacaactg ggagggcgag
1860
tactttctgga cggccctgca ggacctcaac agcaccggct ccttcttctg gctcagtggg
1920
gatgaagtca tgtacaccca ctggaaccgg gaccagcccg ggtacagccg tgggggctgc
1980
gtggcgctgg ccaactggcag cgccatgggg ctgtgggagg tgaagaactg tacctcgttc
2040
cgggcccgc acatctgccg gcagagcctg ggcactccag tgacgccgga gctgccgggg
2100
ccagatccca cggccagcct cactggctcc tgtcccagg gctgggcctc ggacaccaaa
2160
ctccggtatt gctataaggt gttcagctca gagcggctgc aggacaagaa gagctgggtc
2220
caggcccagg gggcctgccg ggagctgggg gccagctgc tgagcctggc cagctacgag
2280
gaggagcact ttgtggccaa catgctcaac aagatcttcg gtgaatcaga acccgagatc
2340
cacgagcagc actggttctg gatcggcctg aaccgtcggg atcccagagg gggtcagagt
2400
tggcgctgga gcgacggcgt agggttctct taccacaatt tcgaccggag ccggcacgac
2460

gacgacgaca tccgaggctg tgcggtgctg gacctggcct ccctgcagtg ggtggccatg
2520
cagtgcgaca cacagctgga ctggatctgc aagatcccca gaggtacgga cgtgcgggag
2580
cccgacgaca gccctcaagg ccgacgggaa tggctgcgct tccaggaggc cgagtacaag
2640
ttctttgagc accactccac gtgggcgag ggcgagcgca tctgcacgtg gttccaggcc
2700
gagctgacct ccgtgcacag ccaggcggag ctagacttcc tgagccacaa cttgcagaag
2760
ttctcccggg ccaggagca gactgggtgg atcggcctgc acacctctga gagcgatggg
2820
cgcttcagat ggacagatgg ttccattata aacttcatct cctgggcacc aggcaaacct
2880
cggcctgtcg gcaaggacaa gaagtgcgtg tacatgacag ccagccgaga ggactggggg
2940
gaccagaggt gcctgacagc cttgccctac atctgcaagc gcagcaacgt caccaaagaa
3000
acgcagcccc cagacctgcc aactacagcc ctggggggct gccctctga ctggatccag
3060
ttctcaaca agtgttttca ggtccagggc caggaacccc agagccgggt gaagtggta
3120
gaggcacagt tctcctgtga acagcaagag gccagctgg tcaccatcac aaaccttta
3180
gagcaagcat tcatcacagc cagcctgccc aatgtgacct ttgaccttg gattggcctc
3240
catgcctcgc agagggactt ccagtgggtg gagcaggagc ctttgatgta tgccaactgg
3300
gcacctgggg agccctctgg ccctagccct gctcccagtg gcaacaaacc gaccagctgt
3360
gcggtgggtcc tgcacagccc ctcagccac ttactggcc gctgggacga tcggagctgc
3420
acggaggaga cccatggctt catctgccag aagggcacgg acccctccct gagcccgctc
3480
ccagcagcgc tgcccccgcc ccggggcact gagctctcct acctcaacgg caccttcagg
3540
ctgcttcaga agccgctgcg ctggcacgat gccctcctgc tgtgtgagag ccacaatgcc
3600
agcctggcct acgtgcccga ccctacacc caggccttcc tcacgcaggc tgcccagggg
3660
ctgcgcacgc cgctctggat tgggctggct ggcgaggagg gctctcggcg gtactcctgg
3720
gtctcagagg agccgctgaa ctacgtgggc tggcaggacg gggagccgca gcagccgggg
3780
ggctgtacct acgtagatgt ggacggggcc tggcgcacca ccagctgtga caccaagctg
3840
cagggggctg tgtgtgggt tagcagtggg cccctcctc cccgaagaat aagctaccat
3900
ggcagctgtc ccaggggact ggcagactcc gcgtggattc ccttcgggga gcactgctat
3960
tctttccaca tggagctgct gctggggccac aaggaggcgc gacagcgtg ccagagagcg
4020
ggtggggccg tcctgtctat cctggatgag atggagaatg tgtttgtctg ggagcacctg
4080

cagagctatg agggccagag tcggggcgcc tggctgggca tgaacttcaa ccccaaagga
4140
ggcactctgg tctggcagga caacacagct gtgaactact ccaactgggg gccccggggc
4200
ttgggccccca gcatgctgag ccacaacagc tgctactgga ttcagagcaa cagcgggcta
4260
tggcgccccg gcgcttgac caacatcacc atgggtgtcg tctgcaagct tcctcgtgct
4320
gagcagagca gcttctcccc atcagcgctt ccagagaacc cagcggccct ggtggtggtg
4380
ctgatggcgg tgctgctgct cctggccttg ctgaccgcag ccctcatcct ttaccggagg
4440
cgccagagca tcgagcgcg ggccctttgag ggtgcccgtc acagccgcag cagctccagc
4500
cccaccgagg ccactgagaa gaacatcctg gtgtcagaca tggaaatgaa tgagcagcaa
4560
gaatagagcc aggcgcgtgg gcagggccag ggcgggagga gctggggagc tggggccctg
4620
ggtcagtctg gccccccacc agctgcctgt ccagttggcc tattgaaggg tgcccttggg
4680
agtcgtgtt gggagccgga gctgggcaga gcctgggctg gtggggtgcc accctccac
4740
aagggtggg ctgagaccca gcaaagagca gcgtggcgct tccctttctg ggggggcctg
4800
agggtctgtc acctggtcct gtgccccac aggaaccaga ggtaggatgg gagggggaac
4860
gagagcctct ttctccccag agccccggc ccaggcctgt tgatccgcgc ccaggagccc
4920
ccttctttgc agagcccgag gagcctcccc tgtccctcg ggcagatctg ttgtgtctct
4980
cttcccacct ggcagcctca gctctgtgcc cctcaccctg ctccctctcg ccccttctct
5040
cccacccctt ccttctgagc cgggccctgg ggattgggga gccctcttgt tcctgatgag
5100
ggtcagctga gggggtgag catccatcac tcctgtgcct gctggggtgg ctgtggggcg
5160
tggcaggagg ggcctagggt ggttgggcct gagaaccagg gcacgggtgt ggtgtctgct
5220
gggctggaga taagactggg gagagacacc ccaacctccc aggggtgggag ctgggcccggg
5280
ctgggatgtc atctcctgcc gggcggggga gggctctgcc cctggaagag tcccctgtgg
5340
ggacaaaaat aagtcccta acatctccag ctccctggctc tggtttgag caagggaag
5400
ggttgccaga gtccctgggg cccagagga gcaggagtct gggagggccc agagttcacc
5460
ctctagtga tccaggagga gcagacccg agccctggag tggcccagta ccctccaag
5520
aggccacagt cccagccagg acaaagtatg cggcccatcc tgggtgcgaca gcgtgggaca
5580
atgtgaacat ggactcgaag acatggccct ttctctgtag ttgattttt aaatgtgcca
5640
ttattgtttt taaaaaaaaa ggaaaaaaga aaagcaaaca aataaaacac ctttaagagg
5700

cttgaaagaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
5747

<210> 5830

<211> 1479

<212> PRT

<213> Homo sapiens

<400> 5830

```

Met Gly Pro Gly Arg Pro Ala Pro Ala Pro Trp Pro Arg His Leu Leu
 1           5           10           15
Arg Cys Val Leu Leu Leu Gly Cys Leu His Leu Gly Arg Pro Gly Ala
 20           25           30
Pro Gly Asp Ala Ala Leu Pro Glu Pro Asn Val Phe Leu Ile Phe Ser
 35           40           45
His Gly Leu Gln Gly Cys Leu Glu Ala Gln Gly Gly Gln Val Arg Val
 50           55           60
Thr Pro Ala Cys Asn Thr Ser Leu Pro Ala Gln Arg Trp Lys Trp Val
 65           70           75           80
Ser Arg Asn Arg Leu Phe Asn Leu Gly Thr Met Gln Cys Leu Gly Thr
 85           90           95
Gly Trp Pro Gly Thr Asn Thr Thr Ala Ser Leu Gly Met Tyr Glu Cys
 100          105          110
Asp Arg Glu Ala Leu Asn Leu Arg Trp His Cys Arg Thr Leu Gly Asp
 115          120          125
Gln Leu Ser Leu Leu Leu Gly Ala Arg Thr Ser Asn Ile Ser Lys Pro
 130          135          140
Gly Thr Leu Glu Arg Gly Asp Gln Thr Arg Ser Gly Gln Trp Arg Ile
 145          150          155          160
Tyr Gly Ser Glu Glu Asp Leu Cys Ala Leu Pro Tyr His Glu Val Tyr
 165          170          175
Thr Ile Gln Gly Asn Ser His Gly Lys Pro Cys Thr Ile Pro Phe Lys
 180          185          190
Tyr Asp Asn Gln Trp Phe His Gly Cys Thr Ser Thr Gly Arg Glu Asp
 195          200          205
Gly His Leu Trp Cys Ala Thr Thr Gln Asp Tyr Gly Lys Asp Glu Arg
 210          215          220
Trp Gly Phe Cys Pro Ile Lys Ser Asn Asp Cys Glu Thr Phe Trp Asp
 225          230          235          240
Lys Asp Gln Leu Thr Asp Ser Cys Tyr Gln Phe Asn Phe Gln Ser Thr
 245          250          255
Leu Ser Trp Arg Glu Ala Trp Ala Ser Cys Glu Gln Gln Gly Ala Asp
 260          265          270
Leu Leu Ser Ile Thr Glu Ile His Glu Gln Thr Tyr Ile Asn Gly Leu
 275          280          285
Leu Thr Gly Tyr Ser Ser Thr Leu Trp Ile Gly Leu Asn Asp Leu Asp
 290          295          300
Thr Ser Gly Gly Trp Gln Trp Ser Asp Asn Ser Pro Leu Lys Tyr Leu
 305          310          315          320
Asn Trp Glu Ser Asp Gln Pro Asp Asn Pro Ser Glu Glu Asn Cys Gly
 325          330          335
Val Ile Arg Thr Glu Ser Ser Gly Gly Trp Gln Asn Arg Asp Cys Ser
 340          345          350
Ile Ala Leu Pro Tyr Val Cys Lys Lys Lys Pro Asn Ala Thr Ala Glu

```


355 360 365
 Pro Thr Pro Pro Asp Arg Trp Ala Asn Val Lys Val Glu Cys Glu Pro
 370 375 380
 Ser Trp Gln Pro Phe Gln Gly His Cys Tyr Arg Leu Gln Ala Glu Lys
 385 390 395 400
 Arg Ser Trp Gln Glu Ser Lys Lys Ala Cys Leu Arg Gly Gly Gly Asp
 405 410 415
 Leu Val Ser Ile His Ser Met Ala Glu Leu Glu Phe Ile Thr Lys Gln
 420 425 430
 Ile Lys Gln Glu Val Glu Glu Leu Trp Ile Gly Leu Asn Asp Leu Lys
 435 440 445
 Leu Gln Met Asn Phe Glu Trp Ser Asp Gly Ser Leu Val Ser Phe Thr
 450 455 460
 His Trp His Pro Phe Glu Pro Asn Asn Phe Arg Asp Ser Leu Glu Asp
 465 470 475 480
 Cys Val Thr Ile Trp Gly Pro Glu Gly Arg Trp Asn Asp Ser Pro Cys
 485 490 495
 Asn Gln Ser Leu Pro Ser Ile Cys Lys Lys Ala Gly Gln Leu Ser Gln
 500 505 510
 Gly Ala Ala Glu Glu Asp His Gly Cys Arg Lys Gly Trp Thr Trp His
 515 520 525
 Ser Pro Ser Cys Tyr Trp Leu Gly Glu Asp Gln Val Thr Tyr Ser Glu
 530 535 540
 Ala Arg Arg Leu Cys Thr Asp His Gly Ser Gln Leu Val Thr Ile Thr
 545 550 555 560
 Asn Arg Phe Glu Gln Ala Phe Val Ser Ser Leu Ile Tyr Asn Trp Glu
 565 570 575
 Gly Glu Tyr Phe Trp Thr Ala Leu Gln Asp Leu Asn Ser Thr Gly Ser
 580 585 590
 Phe Phe Trp Leu Ser Gly Asp Glu Val Met Tyr Thr His Trp Asn Arg
 595 600 605
 Asp Gln Pro Gly Tyr Ser Arg Gly Gly Cys Val Ala Leu Ala Thr Gly
 610 615 620
 Ser Ala Met Gly Leu Trp Glu Val Lys Asn Cys Thr Ser Phe Arg Ala
 625 630 635 640
 Arg Tyr Ile Cys Arg Gln Ser Leu Gly Thr Pro Val Thr Pro Glu Leu
 645 650 655
 Pro Gly Pro Asp Pro Thr Pro Ser Leu Thr Gly Ser Cys Pro Gln Gly
 660 665 670
 Trp Ala Ser Asp Thr Lys Leu Arg Tyr Cys Tyr Lys Val Phe Ser Ser
 675 680 685
 Glu Arg Leu Gln Asp Lys Lys Ser Trp Val Gln Ala Gln Gly Ala Cys
 690 695 700
 Gln Glu Leu Gly Ala Gln Leu Leu Ser Leu Ala Ser Tyr Glu Glu Glu
 705 710 715 720
 His Phe Val Ala Asn Met Leu Asn Lys Ile Phe Gly Glu Ser Glu Pro
 725 730 735
 Glu Ile His Glu Gln His Trp Phe Trp Ile Gly Leu Asn Arg Arg Asp
 740 745 750
 Pro Arg Gly Gly Gln Ser Trp Arg Trp Ser Asp Gly Val Gly Phe Ser
 755 760 765
 Tyr His Asn Phe Asp Arg Ser Arg His Asp Asp Asp Ile Arg Gly
 770 775 780
 Cys Ala Val Leu Asp Leu Ala Ser Leu Gln Trp Val Ala Met Gln Cys

```

785              790              795              800
Asp Thr Gln Leu Asp Trp Ile Cys Lys Ile Pro Arg Gly Thr Asp Val
      805              810              815
Arg Glu Pro Asp Asp Ser Pro Gln Gly Arg Arg Glu Trp Leu Arg Phe
      820              825              830
Gln Glu Ala Glu Tyr Lys Phe Phe Glu His His Ser Thr Trp Ala Gln
      835              840              845
Ala Gln Arg Ile Cys Thr Trp Phe Gln Ala Glu Leu Thr Ser Val His
      850              855              860
Ser Gln Ala Glu Leu Asp Phe Leu Ser His Asn Leu Gln Lys Phe Ser
865              870              875              880
Arg Ala Gln Glu Gln His Trp Trp Ile Gly Leu His Thr Ser Glu Ser
      885              890              895
Asp Gly Arg Phe Arg Trp Thr Asp Gly Ser Ile Ile Asn Phe Ile Ser
      900              905              910
Trp Ala Pro Gly Lys Pro Arg Pro Val Gly Lys Asp Lys Lys Cys Val
      915              920              925
Tyr Met Thr Ala Ser Arg Glu Asp Trp Gly Asp Gln Arg Cys Leu Thr
      930              935              940
Ala Leu Pro Tyr Ile Cys Lys Arg Ser Asn Val Thr Lys Glu Thr Gln
945              950              955              960
Pro Pro Asp Leu Pro Thr Thr Ala Leu Gly Gly Cys Pro Ser Asp Trp
      965              970              975
Ile Gln Phe Leu Asn Lys Cys Phe Gln Val Gln Gly Gln Glu Pro Gln
      980              985              990
Ser Arg Val Lys Trp Ser Glu Ala Gln Phe Ser Cys Glu Gln Gln Glu
      995              1000              1005
Ala Gln Leu Val Thr Ile Thr Asn Pro Leu Glu Gln Ala Phe Ile Thr
      1010              1015              1020
Ala Ser Leu Pro Asn Val Thr Phe Asp Leu Trp Ile Gly Leu His Ala
1025              1030              1035              1040
Ser Gln Arg Asp Phe Gln Trp Val Glu Gln Glu Pro Leu Met Tyr Ala
      1045              1050              1055
Asn Trp Ala Pro Gly Glu Pro Ser Gly Pro Ser Pro Ala Pro Ser Gly
      1060              1065              1070
Asn Lys Pro Thr Ser Cys Ala Val Val Leu His Ser Pro Ser Ala His
      1075              1080              1085
Phe Thr Gly Arg Trp Asp Asp Arg Ser Cys Thr Glu Glu Thr His Gly
      1090              1095              1100
Phe Ile Cys Gln Lys Gly Thr Asp Pro Ser Leu Ser Pro Ser Pro Ala
1105              1110              1115              1120
Ala Leu Pro Pro Ala Pro Gly Thr Glu Leu Ser Tyr Leu Asn Gly Thr
      1125              1130              1135
Phe Arg Leu Leu Gln Lys Pro Leu Arg Trp His Asp Ala Leu Leu Leu
      1140              1145              1150
Cys Glu Ser His Asn Ala Ser Leu Ala Tyr Val Pro Asp Pro Tyr Thr
      1155              1160              1165
Gln Ala Phe Leu Thr Gln Ala Ala Arg Gly Leu Arg Thr Pro Leu Trp
      1170              1175              1180
Ile Gly Leu Ala Gly Glu Gly Ser Arg Arg Tyr Ser Trp Val Ser
1185              1190              1195              1200
Glu Glu Pro Leu Asn Tyr Val Gly Trp Gln Asp Gly Glu Pro Gln Gln
      1205              1210              1215
Pro Gly Gly Cys Thr Tyr Val Asp Val Asp Gly Ala Trp Arg Thr Thr

```

1220 1225 1230
 Ser Cys Asp Thr Lys Leu Gln Gly Ala Val Cys Gly Val Ser Ser Gly
 1235 1240 1245
 Pro Pro Pro Pro Arg Arg Ile Ser Tyr His Gly Ser Cys Pro Gln Gly
 1250 1255 1260
 Leu Ala Asp Ser Ala Trp Ile Pro Phe Arg Glu His Cys Tyr Ser Phe
 1265 1270 1275 1280
 His Met Glu Leu Leu Leu Gly His Lys Glu Ala Arg Gln Arg Cys Gln
 1285 1290 1295
 Arg Ala Gly Gly Ala Val Leu Ser Ile Leu Asp Glu Met Glu Asn Val
 1300 1305 1310
 Phe Val Trp Glu His Leu Gln Ser Tyr Glu Gly Gln Ser Arg Gly Ala
 1315 1320 1325
 Trp Leu Gly Met Asn Phe Asn Pro Lys Gly Gly Thr Leu Val Trp Gln
 1330 1335 1340
 Asp Asn Thr Ala Val Asn Tyr Ser Asn Trp Gly Pro Pro Gly Leu Gly
 1345 1350 1355 1360
 Pro Ser Met Leu Ser His Asn Ser Cys Tyr Trp Ile Gln Ser Asn Ser
 1365 1370 1375
 Gly Leu Trp Arg Pro Gly Ala Cys Thr Asn Ile Thr Met Gly Val Val
 1380 1385 1390
 Cys Lys Leu Pro Arg Ala Glu Gln Ser Ser Phe Ser Pro Ser Ala Leu
 1395 1400 1405
 Pro Glu Asn Pro Ala Ala Leu Val Val Val Leu Met Ala Val Leu Leu
 1410 1415 1420
 Leu Leu Ala Leu Leu Thr Ala Ala Leu Ile Leu Tyr Arg Arg Arg Gln
 1425 1430 1435 1440
 Ser Ile Glu Arg Gly Ala Phe Glu Gly Ala Arg Tyr Ser Arg Ser Ser
 1445 1450 1455
 Ser Ser Pro Thr Glu Ala Thr Glu Lys Asn Ile Leu Val Ser Asp Met
 1460 1465 1470
 Glu Met Asn Glu Gln Gln Glu
 1475

<210> 5831

<211> 2216

<212> DNA

<213> Homo sapiens

<400> 5831

nntccccgtt tattcatctt tggttcgtat ttctcgatct tacaagttcg taggtttgag
 60
 aaagaacagg aaaaggtgtc ttctcacaaa taacatgtgc tggagatgac aacttattga
 120
 actcttaagt tctcagcact atgttatgca cttgacgggc attactttaa tcctccactg
 180
 tgagatactt gttattgcct cattttgtag acgagaaaac gggcatagag ggtgagacat
 240
 tggcccaggt tcattccgta agggttggag cctggaattc agatacagga ggaagttaac
 300
 atccctaata ggaggggttct gggtactggg gccactgggc ttcttggcag agctgtacac
 360
 aaagaatttc agcagaataa ttggcatgca gttggctgtg gtttcagaag agcaagacca
 420

aaatttgaac aggttaatct gttggattct aatgcagttc atcacatcat tcatgatttt
480
cagcccatg ttatagtaca ttgtgcagca gagagaagac cagatgttgt agaaaatcag
540
ccagatgctg cctctcaact taatgtggat gcttctggga atttagcaaa ggaagcagct
600
gctgttggag catttctcat ctacattagc tcagattatg tatttgatgg aacaaatcca
660
ccttacagag aggaagacat accagctccc cttaaatttgt atggcaaaac aaaattagat
720
ggagaaaagg ctgtcctgga gaacaatcta ggagctgctg ttttgaggat tcctattctg
780
tatggggaag ttgaaaagct cgaagaaagt gctgtgactg ttatgtttga taaagtgcag
840
ttcagcaaca agtcagcaaa catggatcac tggcagcaga gggtcccccac acatgtcaaa
900
gatgtggcca ctgtgtgccg gcagctagca gagaagagaa tgctggatcc atcaattaag
960
ggaacctttc actggtcttg caatgaacag atgactaagt atgaaatggc atgtgcaatt
1020
gcagatgcct tcaacctccc cagcagtcac ttaagaccta ttactgacag ccctgtccta
1080
ggagcacaac gtccgagaaa tgctcagctt gactgtcca aattggagac cttgggcatt
1140
ggccaacgaa caccatttcg aattggaatc aaagaatcac tttggccttt cctcattgac
1200
aagagatgga gacaaacggc ctttcattag tttatttgtg ttgggttctt tttttttttt
1260
aaatgaaaag tatagtatgt ggcacttttt aaagaacaaa ggaaatagtt ttgtatgagt
1320
actttaattg tgactcttag gatctttcag gtaaatgatg ctcttgact agtgaaattg
1380
tctaaagaaa ctaaagggca gtcatgccct gtttgagta atttttcttt ttatcatttt
1440
gtttgtcctg gctaaacttg gagtttgagt atagtaaatt atgatcctta aatatttgag
1500
agtcaggatg aagcagatct gctgtagact tttcagatga aattgttcat tctcgtaacc
1560
tccatatttt caggattttt gaagctgttg accttttcat gttgattatt ttaaattgtg
1620
tgaaatagta taaaaatcat tgggtttcat tatttgcttt gcctgagctc agatcaaaat
1680
gtttgaagaa aggaacttta tttttgcaag ttacgtacag tttttatgct tgagatattt
1740
caacatgtta tgtatattgg aacttctaca gcttgatgcc tcctgctttt atagcagttt
1800
atggggagca cttgaaagag cgtgtgtaca tgtatttttt ttctaggcaa acattgaatg
1860
caaacgtgta tttttttaat ataaatatat aactgtcctt ttcatcccat gttgccgcta
1920
agtgatattt catatgtgtg gttatactca taataatggg ccttgtaagt cttttcacca
1980
ttcatgaata ataataaata tgtactgctg gcatgtaatg cttagttttc ttgtatttac
2040

ttcttttttt aaatgtaagg accaaacttc taaactaatt gttcttttgt tgctttaatt
 2100
 tttaaaaaatt acattcttct gatgtaacat gtgatacata caaaagaata tagtttaata
 2160
 tgtattgaaa taaaacacaa taaaattaac acttgaaaaa aaaaaaaaaa aaaaaa
 2216

<210> 5832

<211> 322

<212> PRT

<213> Homo sapiens

<400> 5832

Gly	Leu	Glu	Pro	Gly	Ile	Gln	Ile	Gln	Glu	Glu	Val	Asn	Ile	Pro	Asn
1				5				10						15	
Arg	Arg	Val	Leu	Val	Thr	Gly	Ala	Thr	Gly	Leu	Leu	Gly	Arg	Ala	Val
			20					25					30		
His	Lys	Glu	Phe	Gln	Gln	Asn	Asn	Trp	His	Ala	Val	Gly	Cys	Gly	Phe
	35					40						45			
Arg	Arg	Ala	Arg	Pro	Lys	Phe	Glu	Gln	Val	Asn	Leu	Leu	Asp	Ser	Asn
	50					55					60				
Ala	Val	His	His	Ile	Ile	His	Asp	Phe	Gln	Pro	His	Val	Ile	Val	His
65				70					75					80	
Cys	Ala	Ala	Glu	Arg	Arg	Pro	Asp	Val	Val	Glu	Asn	Gln	Pro	Asp	Ala
			85					90					95		
Ala	Ser	Gln	Leu	Asn	Val	Asp	Ala	Ser	Gly	Asn	Leu	Ala	Lys	Glu	Ala
			100					105					110		
Ala	Ala	Val	Gly	Ala	Phe	Leu	Ile	Tyr	Ile	Ser	Ser	Asp	Tyr	Val	Phe
		115				120						125			
Asp	Gly	Thr	Asn	Pro	Pro	Tyr	Arg	Glu	Glu	Asp	Ile	Pro	Ala	Pro	Leu
	130					135					140				
Asn	Leu	Tyr	Gly	Lys	Thr	Lys	Leu	Asp	Gly	Glu	Lys	Ala	Val	Leu	Glu
145				150					155					160	
Asn	Asn	Leu	Gly	Ala	Ala	Val	Leu	Arg	Ile	Pro	Ile	Leu	Tyr	Gly	Glu
			165					170					175		
Val	Glu	Lys	Leu	Glu	Glu	Ser	Ala	Val	Thr	Val	Met	Phe	Asp	Lys	Val
			180					185					190		
Gln	Phe	Ser	Asn	Lys	Ser	Ala	Asn	Met	Asp	His	Trp	Gln	Gln	Arg	Phe
		195				200						205			
Pro	Thr	His	Val	Lys	Asp	Val	Ala	Thr	Val	Cys	Arg	Gln	Leu	Ala	Glu
	210					215					220				
Lys	Arg	Met	Leu	Asp	Pro	Ser	Ile	Lys	Gly	Thr	Phe	His	Trp	Ser	Gly
225				230						235				240	
Asn	Glu	Gln	Met	Thr	Lys	Tyr	Glu	Met	Ala	Cys	Ala	Ile	Ala	Asp	Ala
			245					250					255		
Phe	Asn	Leu	Pro	Ser	Ser	His	Leu	Arg	Pro	Ile	Thr	Asp	Ser	Pro	Val
		260					265					270			
Leu	Gly	Ala	Gln	Arg	Pro	Arg	Asn	Ala	Gln	Leu	Asp	Cys	Ser	Lys	Leu
		275					280					285			
Glu	Thr	Leu	Gly	Ile	Gly	Gln	Arg	Thr	Pro	Phe	Arg	Ile	Gly	Ile	Lys
	290					295					300				
Glu	Ser	Leu	Trp	Pro	Phe	Leu	Ile	Asp	Lys	Arg	Trp	Arg	Gln	Thr	Val
305				310						315				320	
Phe	His														

<210> 5833
 <211> 805
 <212> DNA
 <213> Homo sapiens

<400> 5833
 aagcttgacag cagcacaggg acaggcaccc ttggagccca cccaagatgg gaggcgccatt
 60
 gaaacatgtc caaaaggaga cgagccaaga ggtgacgagc aacaggtgga aagtatgacc
 120
 cctaaacctg tgctccagga agaaaacaac caagagtctt ttattgcatt tgctcgggtg
 180
 ttcagtggtg tggctcgaag aggaaagaaa atttttgtct tggggcccaa atacagtcct
 240
 cttgagtttt tacgaagggt accattaggc ttctcagctc caccagatgg cctcccccaa
 300
 gtccccaca tggcatactg tgctctggaa aacctgtatc ttctgatggg aagggaactg
 360
 gaatatctag aggaggtacc tccaggaaat gtgctaggaa taggaggcct tcaagatttt
 420
 gtgctgaaat ctgcaacact gtgtagcctg ccatacctgcc caccatttat accactcaac
 480
 ttcgaagcca ctccatttgt gagagttgct gttgaaccaa aacatccaag tgaaatgcct
 540
 cagctcgtaa aaggaatgaa actgttaaac caggctgatc cctgtgtcca gattttaatt
 600
 caggaaacgg gagagcacgt tttagtcaca gcaggagaag tccaccttca gcgatgcctg
 660
 gatgacttaa aagaaagggt tgcaaagatt catatcagtg tatctgaacc tattattcca
 720
 ttcagagaaa caatcacaaa accccccaaa gttgacatgg tcaatgaaga aataggcaaa
 780
 cagcaaaaag ttgcagtcac acacc
 805

<210> 5834
 <211> 268
 <212> PRT
 <213> Homo sapiens

<400> 5834
 Lys Leu Ala Ala Gln Gly Gln Ala Pro Leu Glu Pro Thr Gln Asp
 1 5 10 15
 Gly Ser Ala Ile Glu Thr Cys Pro Lys Gly Asp Glu Pro Arg Gly Asp
 20 25 30
 Glu Gln Gln Val Glu Ser Met Thr Pro Lys Pro Val Leu Gln Glu Glu
 35 40 45
 Asn Asn Gln Glu Ser Phe Ile Ala Phe Ala Arg Val Phe Ser Gly Val
 50 55 60
 Ala Arg Arg Gly Lys Lys Ile Phe Val Leu Gly Pro Lys Tyr Ser Pro
 65 70 75 80
 Leu Glu Phe Leu Arg Arg Val Pro Leu Gly Phe Ser Ala Pro Pro Asp